DOCUMENT RESUME

ED 378 084 SO 024 311

AUTHOR	Wurtzel, Claire
TITLE	Central Park: A Humanities Curriculum for Children with Learning Disabilities.
INSTITUTION	Churchill Center for Learning Disabilities, Inc., New York, NY.
PUB DATE	[94]
NOTE	77p.
AVAILABLE FROM	Churchill School and Center for Learning Disabilities, 22 East 95th Street, New York, NY 10128.
PUB TYPE	Guides - Classroom Use - Teaching Guides (For Teacher) (052)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*Curriculum Development; Elementary Education; *Elementary School Students; Field Trips; *Humanities Instruction; *Learning Activities; Learning Disabilities; Maps; Park Design; *Parks
IDENTIFIERS	*Central Park NY; New York (New York)

ABSTRACT

This manual reflects the highlights of an urban park study developed and tested over a 6-year period at the Churchill School, an elementary school for children with learning disabilities. This book makes possible an integrated study that develops understandings in natural science and the social studies along with reading, writing, and language skills. It can be used as a core curriculum for a time, or for supplemental activities throughout a school year. Because it is based on experience, the park study makes possible extensive and sophisticated learning without dependence on written texts. The plan draws on the widest possible variety of modes of learning and expression. In this study, learning can be a social as well as an intellectual experience. Reliance on observation and joint experience rather than print materials helps to develop group cooperation and interdependence. The statement of main ideas for each section provides a simple, usable intellectual organization. Building on experience, children will gradually develop important generalizations about change, adaptation, social patterns, and human needs. The book contains 7 chapters: (1) adopt a park; (2) mapping and orienting; (3) parkworks or design; (4) nature study; (5) park study or history; (6) design; and (7) parks for people. A teacher summary sums up some general principles of the park study and suggests activities that can be used in any part of a study. It lists academic skills, thinking skills, attitudes, and values. A bibliography includes entries on biographies, ecology and conservation, animals, birds, insects, plants, trees, water, and winter. (DK)

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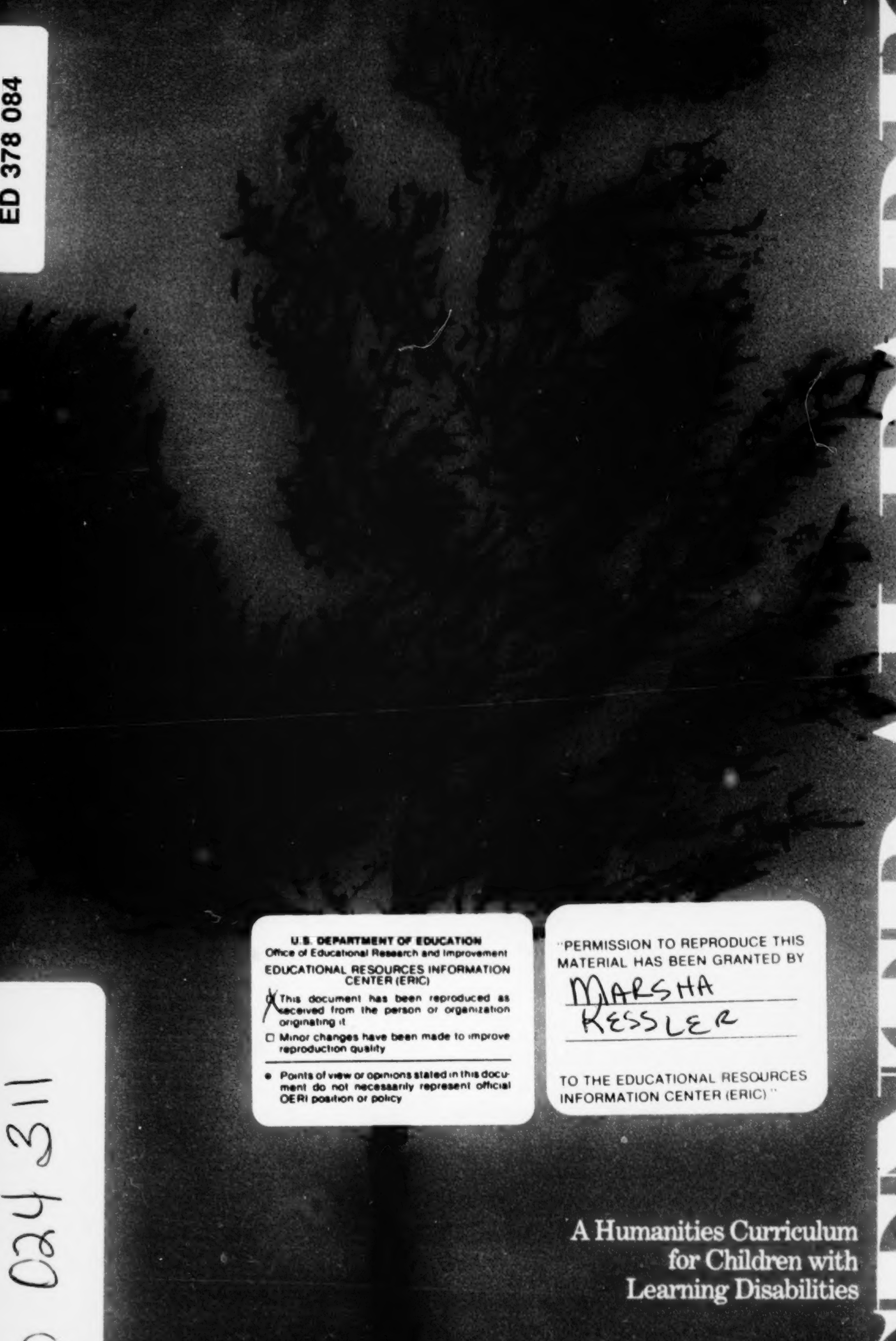

CENTRAL PARK

A Humanities Curriculum
for Children with
Learning Disabilities

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CENTRAL

PARK

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Acknowledgement

This manual reflects the highlights of an Urban Park Study developed and tested over a 6 year period at The Churchill School, an elementary school for children with learning disabilities.

I wish to thank all those who worked to develop this program.

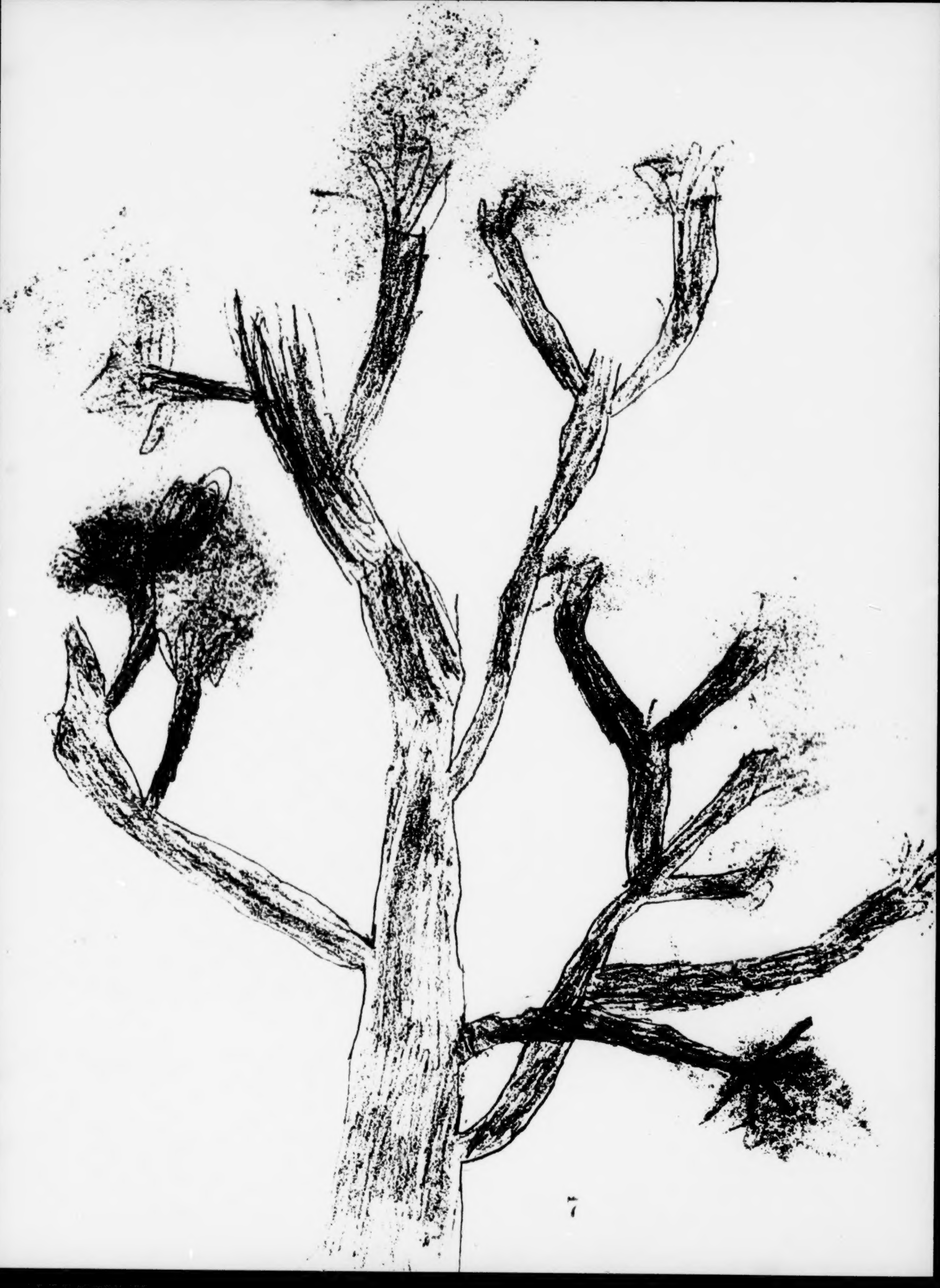
Thanks to the Central Park Task Force (Robert Finkelstein, Marie Ruby, Rhoda Waller, and especially Geraldine Weinstein) who were my inspiration and helped me to appreciate the limitless learning opportunities an urban park has to offer. Also thanks to Sally Austin and Laurie Weisman from the Central Park Conservancy, who continue to breathe life into our Park Study.

I am grateful to Mary Newmann, Churchill School Director; Mary Reid, the writer; and to my assistant Debra Geller, for their hard work, creative assistance and enthusiastic support.

Finally, this manual would not have been possible without the help of the dedicated Churchill School students and teachers who brought The Park Study into their classrooms. Thanks to Merilee Eckert, Debra Geller, Marjorie Hoffman, Susan Jackson, Mardi Morrow, Elizabeth Sheehan, and Buffy Smith for bringing their own unique styles and approaches to the program as well as their strong commitments to creative and meaningful education.

Claire Wurtzel

The Sky is nice.
The Sun is pretty.
The clouds are gray.
The moon is round.
The leaves are orange.
The other Trees are nice.
The roads are Pretty.
The People are warm.
Eric



Rationale: Why a Park Study

Research has shown that effective learning occurs in a context rather than in isolated skills exercises or textbook readings. The urban park provides such a context, with some outstanding advantages for study.

Parks provide a multitude of sensory experiences and the opportunity for extended observation of the natural world.

The delight children take in the park provides a powerful motivation for study. Identification with the park, a particular walk or section of it, a tree or flower bed, makes a park study a personal undertaking.

Unique Elements

This book makes possible an integrated study that develops understandings in natural science and the social studies along with reading, writing, and language skills. It can be used as a core curriculum for a time, or for supplemental activities throughout a school year.

Because it is based on experience, the park study makes possible extensive and sophisticated learning without dependence on written texts.

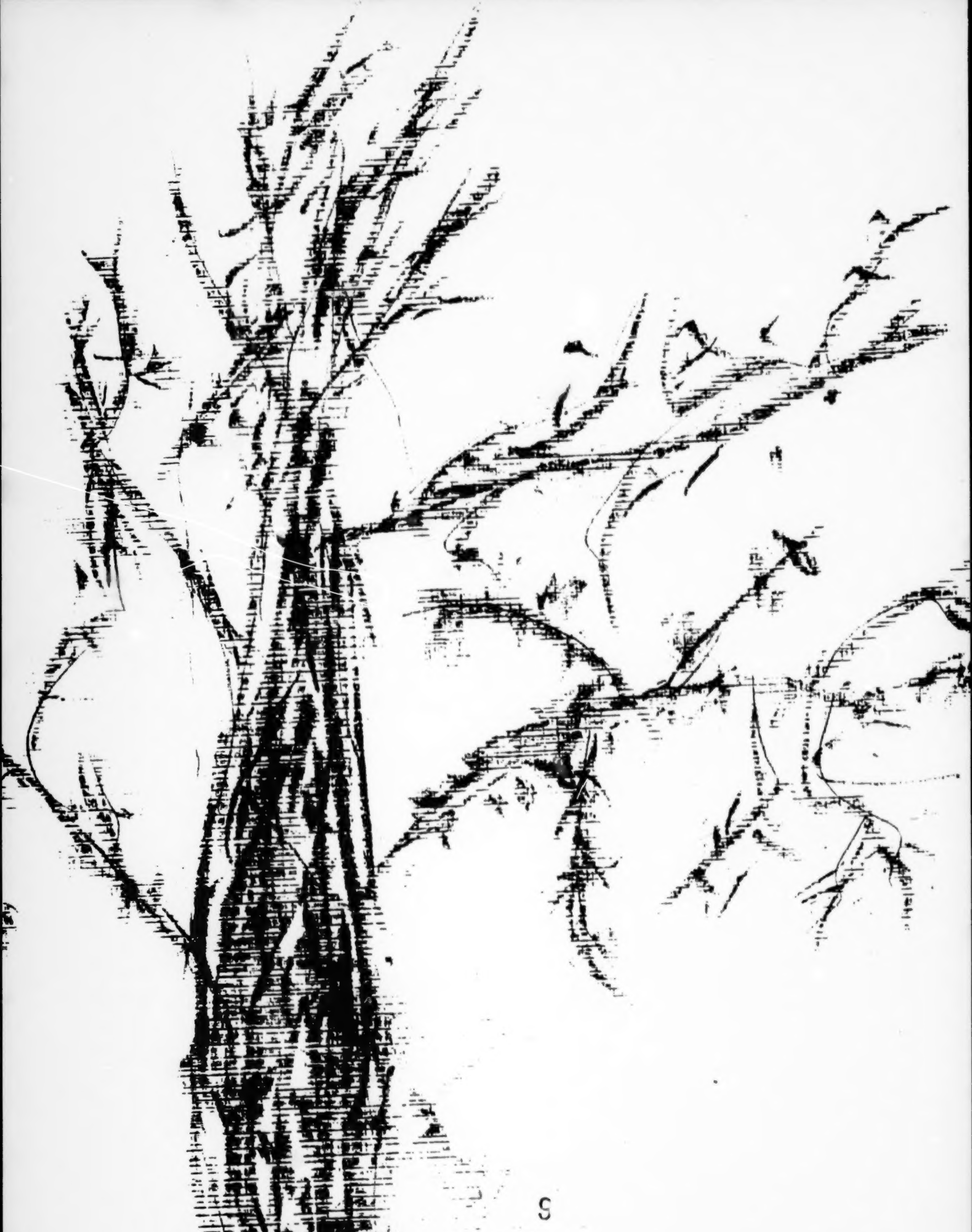
The plan draws on the widest possible variety of modes of learning and expression.

In this study, learning can be a social as well as an intellectual experience. Reliance on observation and joint experience rather than print materials helps to develop group cooperation and interdependence.

The book helps teachers make a coherent, expanded study possible while still allowing them to tailor it to the needs and interests of their students.

The statement of "main ideas" for each section provides a simple, usable intellectual organization. Building on experience, children will gradually develop important generalizations about change, adaptation, social patterns, and human needs.

Becoming "experts" on a part of their world that most adults know little about will boost children's self-esteem while it develops skills.



Learning and Disabilities

Children learn through their senses: by seeing things in reality or in photographs; by touching and feeling; by tasting and smelling. Children learn by doing. They organize their experiences into a personal knowledge of the world by actively recreating what they have seen, heard, and felt; by constructing things; by painting and drawing; by telling stories.

Children learn by asking their own questions. Their sensory experience and their manipulation of materials provoke questions and confusions that lead to clarification and an extension of knowledge. Finding the answers to their questions is an intrinsically satisfying process. It is worthwhile to record and use children's own questions as a base for study.

All of this is true for children with learning disabilities. They need to observe and think about the world around them and they need real-life experiences to strengthen and clarify their thinking processes.

Using absorbing, real-life subject matter, children more quickly develop new vocabulary, concepts, and skills. As they read about familiar experiences, their reading comprehension expands. Telling and writing stories about their own trips builds expressive skills, and having special knowledge of "their" topic can be a source of pride.

Yet most curriculum materials for children with learning disabilities are strictly skills-oriented. One learning disabilities specialist says, "The expectation is that the child is 'on hold' with regard to gathering knowledge while teachers use remedial techniques to 'fix him up'."

The Churchill School's *Central Park Book* is a unique effort to create a curriculum for learning disabled students that allows for specific skill development by concentrating on experience, observation, and thinking. The park study enables students to become true "experts" in a chosen subject; to become more knowledgeable, to make generalizations, and to practice much-needed skills.

Some elm trees are tall
and some elm trees are short
but most elm trees are tall
The leaves on a elm tree are
crooked They are never straight
but I think it is a beautiful tree
Joan

Developing a Study

What is a park?
Why is the park?
How did it happen?
These questions can be explored and answered in a park study.
They will be asked in different ways as your study goes on.

The first question, "What is a park?" leads to the development of a concept. "Park" can mean a nature preserve, garden, sports facility, or a picnic area. A park is a resource that a community has planned and paid for – it is a community project. Throughout their park study, children will be adding to their definition of what constitutes a park.

"Why is the park?" brings children to the knowledge that people want and need samples of the natural world around them. In cities, where nature is hard to find, parks provide this. As they observe activities in the park, and talk with people who use the park, children will enlarge their understanding of the social and psychological needs of people in cities.

"How did it happen?" leads to an historical study. Children can find out details of how Central Park was planned and built, how people thought about the need for a park in the nineteenth century, and how they see it now.

In using this book you need to plan to be flexible and to follow your students' interests.

The purpose of the study/book is to help you provide *content* for children to explore and think about. Significant understandings can be developed in several areas in a park study. The thinking process that leads to these understandings is what is important.

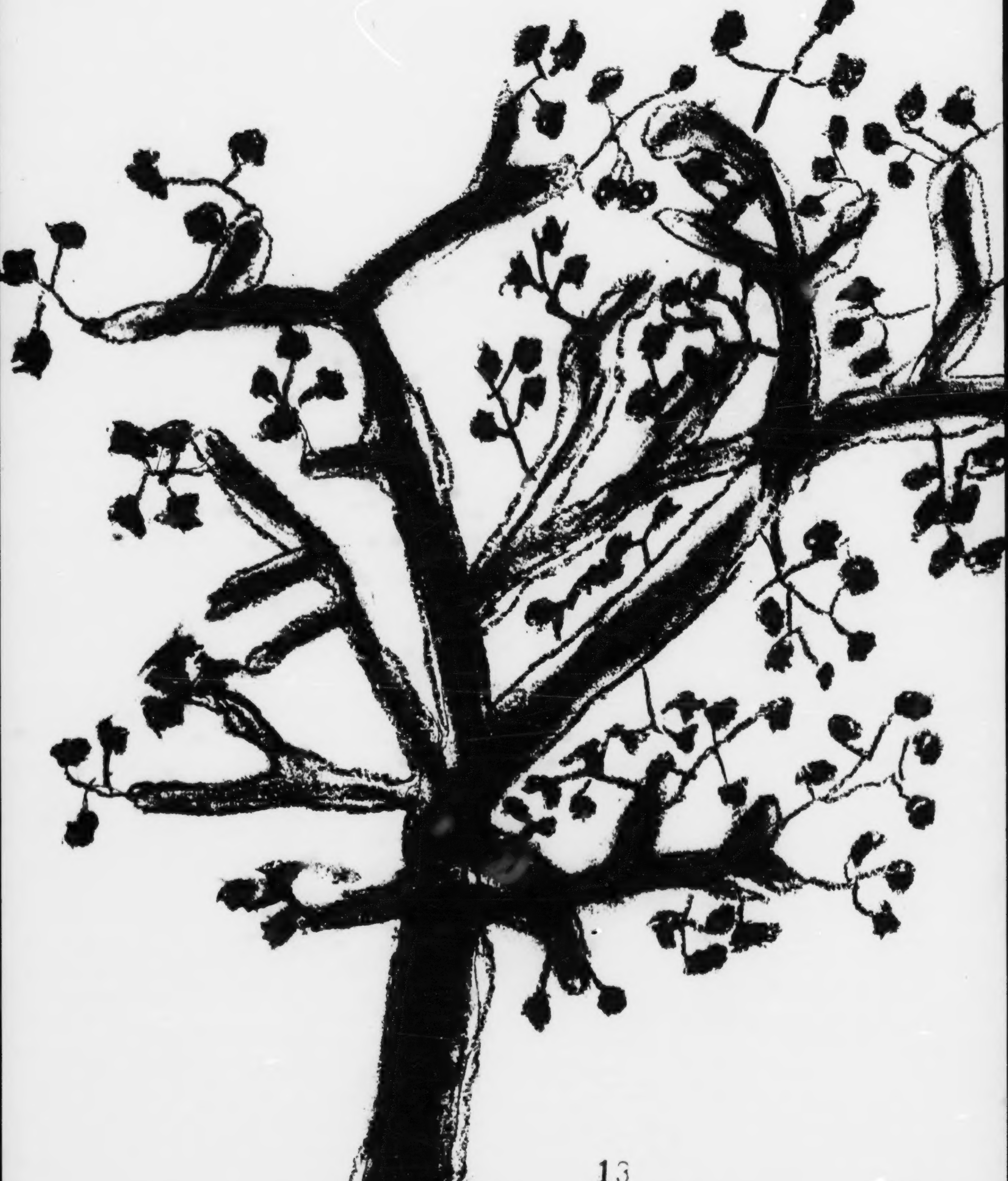
My tree is pretty.
like a person with no clothes.
My tree is like a gigantic bear.
My tree looks like a spider and is
unique and creepy.
My tree is wicked and has a family
that lives right next door.
My tree looks cold and empty.
My tree is surrounded by other
trees. By Jason

Making Choices

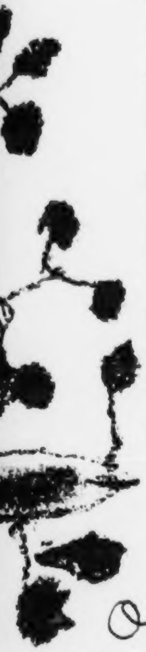
Use your interests: scan the book to see what subjects interest you and what main ideas can be developed in these areas. Write down the topics and ideas that catch your eye. Consider *your* interests as you plan a first trip.

Use children's interests: consider what you know about your students' interests, skills, and needs. One group may be most interested in animals; another in classroom experiments with soil and plants; yet another in interviewing people and learning about their lives and jobs. Children may be poorly oriented and need a great deal of help with direction and simple mapping. Or they may be fearful of the unfamiliar and of the natural world. Think about what the park study can provide to excite children and to help them grow.

Select one or two other areas of interest. Examine the main ideas for each subject area and *decide what your goals are* in pursuing the study.



Planning



Use Adopt-a-Park, Chapter 1, to help you get going. Start a "park study notebook" and write the main ideas you mean to develop. They will form the backbone of your study.

Compile a list of activities, trips, and discussion questions that will lead to these understandings. Break the list down carefully. Think about the sequence of smaller ideas and facts that will lead to generalization.

According to your schedule, plan major trips and discussions for a couple of weeks at a time. Also allow time for individual research, creative projects, and skills work.

Each week, evaluate the children's understanding in the light of your goals. Revise your sequence of experiences, questions, and understandings if needed.

Once upon a time there
was a planet called Currly top.
It was a weird planet.
It was called Currly top
Because the outside was currly
all over. Well one day a reporter
came to a place they'z never seen.
He found a person and asked.
"What is this big thing?"
"It is a park". Said the heeman."
"What do you humans do there?"
"Well lots of things." "The humans play
sports there and walk and Jog and
bike and Rollerskate and lots more".
It's big and has a Reservuor
and streams and toll and short
trees"."It's weird." "Naturre animals
made it!"

The
END

Trips

Trips are a major part of the park study. They are fun, stimulating, and full of content and observations. Consult the general instructions for trip taking on page 64.

Open your study with one or more trips. Focus the trip to stimulate interest in your selected topic and to elicit varied responses. Keep records so that you are sure about the children's interests, can remember questions, and are able to follow their progress in ideas and understanding. Note also possible arts activities and excursions that might be fruitful.

Make group experience charts of trips. Use group time to discuss experiences and make inferences, draw conclusions. Help children to listen to questions, answer appropriately, and listen to and answer each other. Work on charts and tables that are a permanent record of children's findings.

Skills

Weave in your usual skills work. Use park words for vocabulary and spelling. Prepare fill-in worksheets to review research and trips. Ask children to write or dictate sentences about their experiences.

Main Ideas:

Know what you are trying to achieve.
Preparation: Have a focus – a few questions, something to draw or collect.
Experience: (trip, interview, project) *Have Fun!*
Record: Do a group story, chart, trip sheets, pictures.
Discussion: Share impressions and feelings. Ask open-ended questions: *What happened? What did you like about . . .?*
Ask questions that lead to connections and generalizations: *What do you think this means? Why do you think that happened?* Have children summarize what they have learned.
Keep children's questions for further inquiry: *What else do we want to find out?*

Keep it Moving: Records

Use a running log to help you stay on course and keep the study moving. Record the children's comments and questions. Write all notes on the right-hand pages. Then, on the corresponding left-hand page, write your analysis of what you have heard and your plans for further study.

green is my tree
Small is Free as to be
baby is to grow and
be Bigger and Show
a little yellow Makes to
look bigger and Flow
little branches are So
gleam, gleam as a dream
beech is my tree, oh yes
it is beech, beech beech.
That's me! by Sarah

Excursions

Vary your study with experiences that are not slavishly connected with your plan. Invite children to create personal art work. Encourage writing that draws on feelings rather than information. Try listening to music.

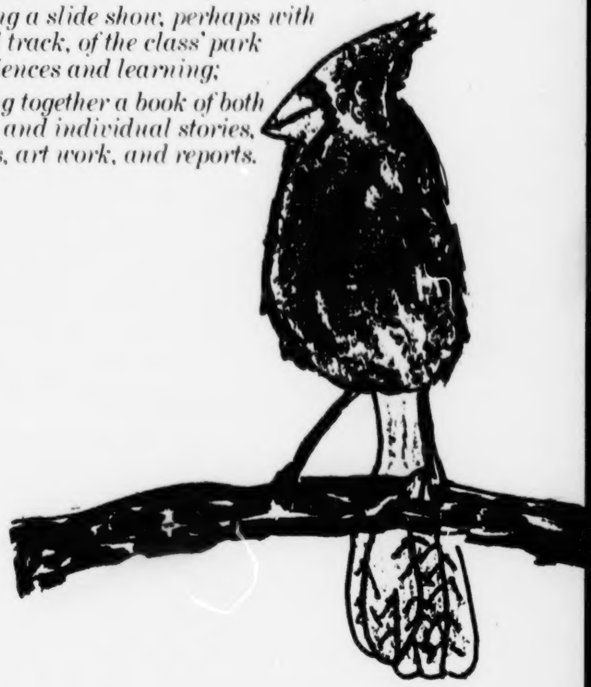
Endings

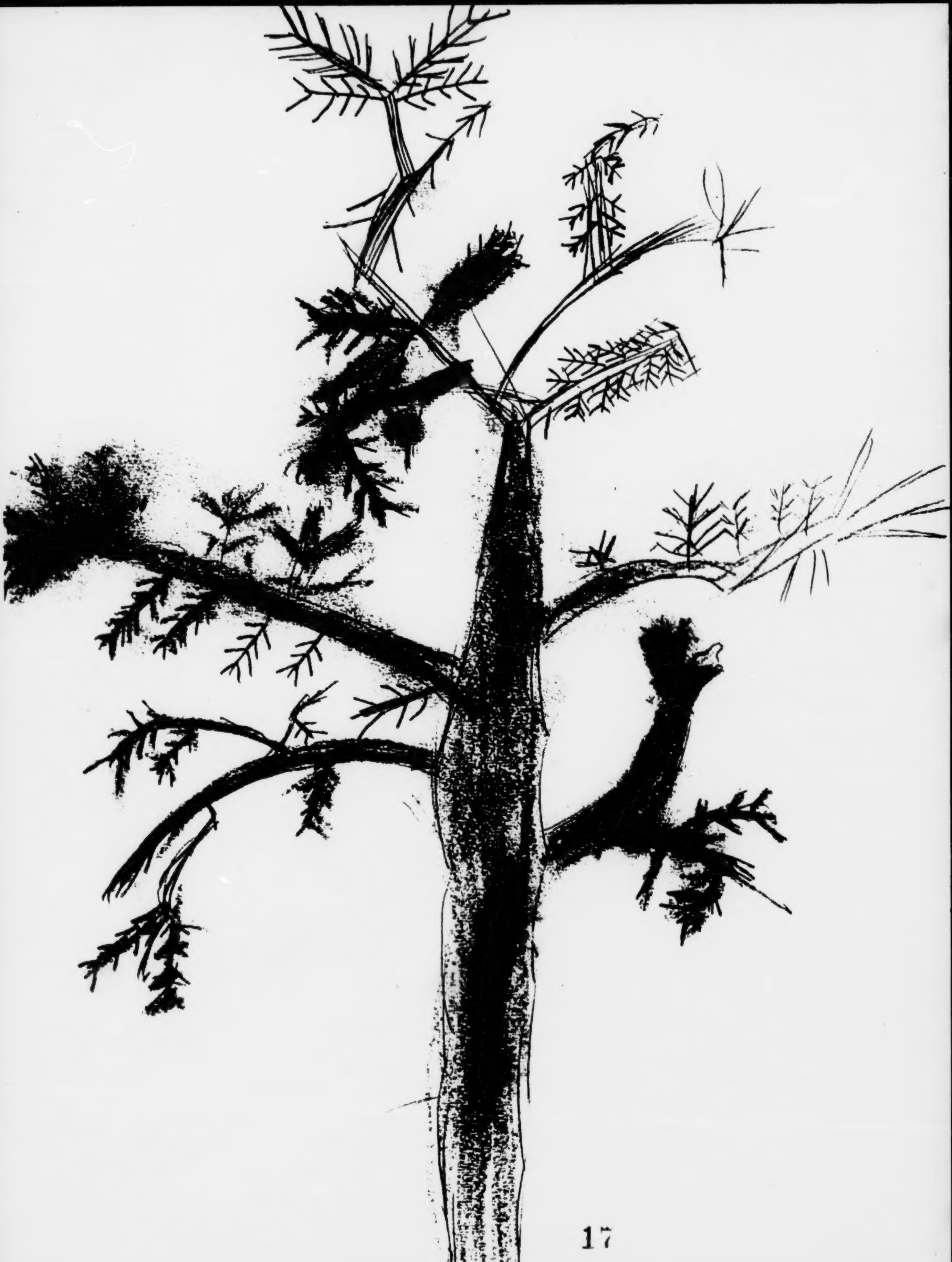
Help students to come to some statement(s) of what they have learned. This might be a short class report ("big book" style on oak tag paper) of what they know about the coloring and falling of tree leaves in autumn. It could be a list of charts of birds and animals children have seen in the park, with reports about the animals' food and habits. It might be a table or bar graph of how people use the park, or transcripts of interviews, with illustrations.

An important part of ending any segment of a study is discussion. In preparing the culminating charts, reports, and such, help students verbalize what they have learned. Their collective statements, and the product they complete, are satisfying and enduring evidence of what they have learned.

Some possible culmination projects for a Central Park study are:

- *building a model of the park;*
- *building a model or design of an ideal park;*
- *making a slide show, perhaps with sound track, of the class' park experiences and learning;*
- *putting together a book of both group and individual stories, poems, art work, and reports.*



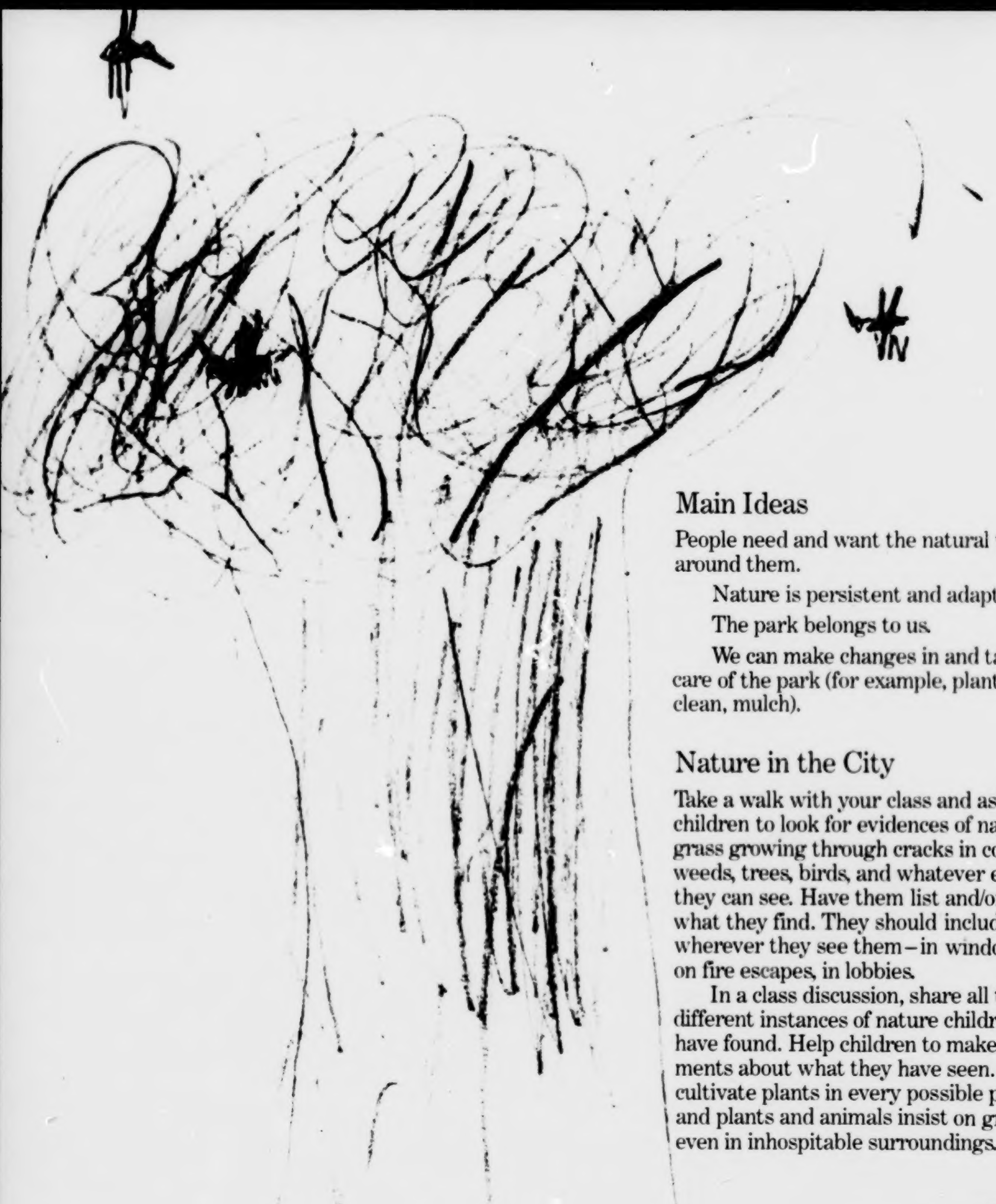


Chapter I
Adopt-a-Park

Make your park study exciting and poignant. Adopt a park! Or adopt trees, a special planted area, or a bit of wilderness. Use this chapter to help children become involved with the park and to begin to develop the concept of "park."

The Park
Early morning in The park
the breeze waves the trees,
the trees mak a sort of quiet sound,
they crunch and crackle.
Water might be making a
whistling sound.
Summer in Central Park
with buches of clouds going by
remands one of people
walking acrossth sky.
cloud monsters,
looks like clouds playing tennis
the invasion of the cloud monsters,
like steam from a factory.
If you went up there and
touched the sky
It would felt like air.
Winter in Central Park.
The ice looks like cement.
Boats are sitting on the water
waiting for it to become summer.
In fall the water reflects trees, buildings,
leaves, skies, clouds.
A round picture the park
looks like if you opened the world with
a key this would look like the inside.

This poem was written by a group of learning disabled children who have a special relationship with Central Park. Reading it, one realizes that the children are seeing, hearing, and sensing the natural events in the park. They know the park in different seasons. Their intense feeling for the park is shown in the last lines: "If you opened the world with a key/this would look like the inside." **Ms. Rome's Class**



Main Ideas

People need and want the natural world around them.

Nature is persistent and adaptable.

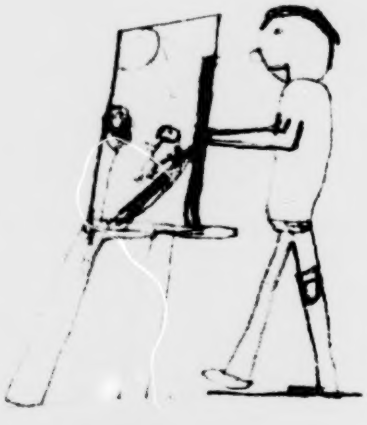
The park belongs to us.

We can make changes in and take care of the park (for example, plant, clean, mulch).

Nature in the City

Take a walk with your class and ask children to look for evidences of nature – grass growing through cracks in concrete, weeds, trees, birds, and whatever else they can see. Have them list and/or sketch what they find. They should include plants wherever they see them – in windowsills, on fire escapes, in lobbies.

In a class discussion, share all the different instances of nature children have found. Help children to make statements about what they have seen. People cultivate plants in every possible place, and plants and animals insist on growing even in inhospitable surroundings.



What Is a Park?

"Park" is a concept that involves space and mapping, the distinction between natural and man-made environments, policy and politics in the use of space, local organization and government. Extend the children's ideas of a park to include not only what is, but also what is desirable. What can parks be? How can we enjoy and preserve them better?

Have children write or dictate:

all the things you do in a park

the people who come to a park

what grows or lives in a park

what is beautiful in a park

what objects and structures are in a park

Help children to make a mural, collage, or other record that summarizes and illustrates their ideas of what is a park. Keep the artwork and their lists, and add to them as the children learn more about what parks can be.

Adopt-a-Park

"Adopting" an area of the park is a way to establish a vital connection. Help your children choose to be interested and involved, to focus their attention for a great learning experience. Here are some things you can "adopt":

trees

individual twigs (see Nature Study)

a garden

a pond

plots of ground for study (see Nature Study)

Explore what you think is workable. Read further in this chapter and look also at the Microground Study section in Nature Study. See Parkworks for activities such as bulb planting and mulching.

There are lots of things to *do* with an adopted tree or area:

map the area; measure paths

make drawings and paintings

plant bulbs in autumn

place mulch around trees and shrubs

clean up an area

do research on trees, plants, animals, insects

observe over time to see seasonal changes and make journals or calendars

make a big book–with maps, pictures, stories, research information, and poems–about your trees or adopted area.

Use the adoption of trees or plots of ground to get children involved with the park. A personal relationship always enhances a learning experience. Whether your goal is to develop skills, increase knowledge about the natural world, or understand how communities work together, adopting a park is a wonderful way to engage children's interest.

Adopting Trees

Choose an interesting wooded area that has different kinds of trees. Encourage each child to pick a personal tree. Provide an outline map of the area on which children can locate and identify their trees. Some other activities you can do with adopted trees are:

Draw the tree–leaves, the whole tree, fruit or nuts or seeds.

Find it in a tree identification book.

Do rubbings of leaves, bark, and seeds.

Read about the tree–its habitat, history; the uses of its fruit, nuts, and bark. Report on the findings.

Make a series of visits to the trees and make drawings to show seasonal changes.

Spread mulch around the tree to protect it for the winter.

Write or dictate a message to the tree, or make up a poem about it.

Write or dictate a story about the animals that live in the tree.

Tree Census

Provide copies of an outline map on which children can record a tree census. Have them mark a circle for each tree. As they find out the trees' names, they can label each circle. They should also report on the condition of trees – those that have dead limbs or open sores.

Adopting a Garden or Planting

Speak with the Parks Department about the possibility of planting bulbs in the park. This is a fall project in which many classes can be involved. There are other things children can do with a garden:

Color in outline maps of the garden to show the different kinds of blossoms.

Find and write down the names of plants.

Sketch leaves, flowers, and whole plants.

Write impressions and words for a garden poem.

Observe the garden at different times of the year, and keep a log that tells how it is changing.

Plan and conduct a cleanup project.

Help in edging paths or spreading wood chips for mulch.

Use a measuring wheel to measure paths and flower beds; make a map of the garden.

Community Action

The children at the Churchill School had a special relationship with the Central Park Task Force and, now, with the Conservancy. They provided artwork for a gathering of sponsors.

If you can, find a way for your children to participate in public affairs. They can make colorful "Keep Your Park Clean" posters, create artwork for advertising park events. Communicate with the Central Park Conservancy and with the Education Division of the Parks Department to find out about nature study classes cleanup, and bulb planting.

Take a trip to the area chosen, using a teacher-made map of the route and area. Have children note the area's characteristics. They can make pictures or write about the area, choose a favorite plant or space. Have children tell what they like. Ask them what the area needs.

Discuss these possible park projects: cleanup, plant bulbs, or spread mulch around trees.

Encourage children to help in planning: What needs to be done? What tools do we need? What happens first? What do we do next?

Make a group plan in large letters on oak tag, and make it part of a project book. Follow with pictures, essays, and a group-created story about the project. If appropriate, make a graph or chart to show some aspect of the experience.
(We picked up ______ cans, ______ bottles.
We planted ______ bulbs.)

Listen

Bring children to an area where they can sit comfortably on the ground. Ask them to find a personal space, close their eyes, and listen. Have the children share the sounds they have heard. They may describe a sound, imitate it, or tell what they think was making the sound. Write down the sounds the children describe for another word list.

Touch

Take a walk during which you encourage children to find different textures – bark, rocks, soil, brush, blossoms, carvings. Carry materials for making rubbings or molds.

For rubbings, bring large sheets of newsprint or drawing paper and fat crayons. Children can use the point or the side of the crayon to bring up the texture of bark or stone on the paper.

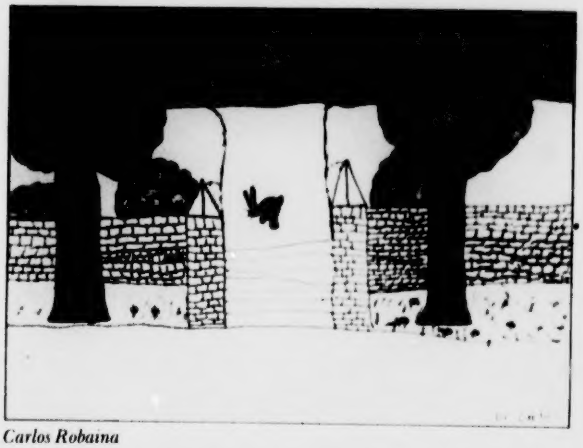
Paper should be fixed to the surface with masking tape so it does not slip and blur the image.

Children can use plasticine to make molds of bark or other pronounced textures.

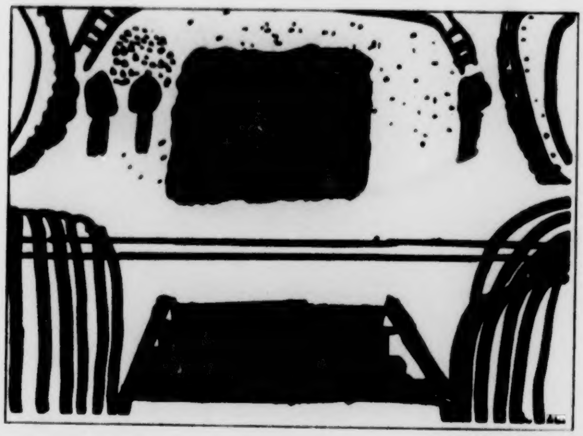
Write

Use your park trips, and especially your adopted area, to develop children's vocabularies and writing skills. Keep adding to your park book. Ask them to write what they see, what they like, what has changed in the park.

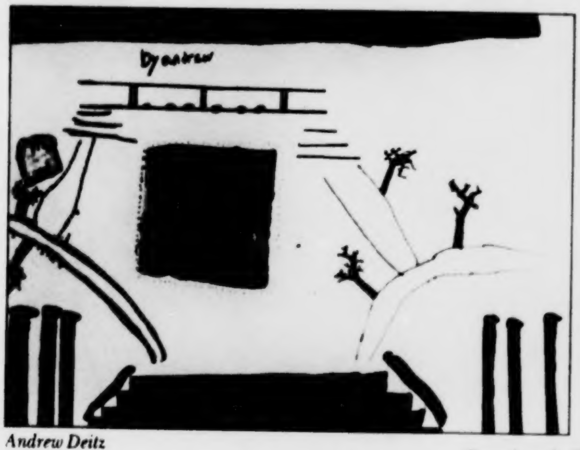
Collect individual children's impressions and sentences for a group piece about the park. (See Writing in the *Teacher's summary*.)



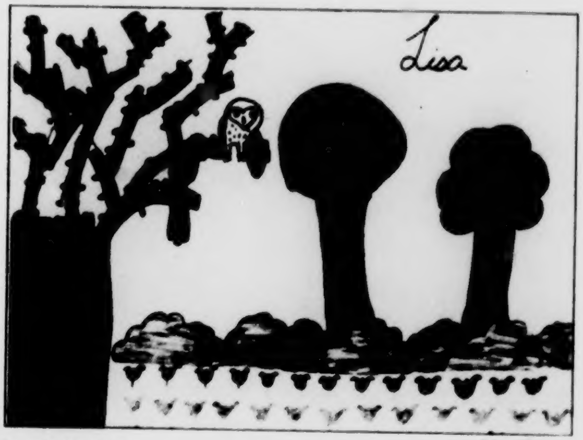
Carlos Robaina



Alex Fishman



Andrew Deitz



Lisa Marcus

Drawings by The Churchill School

The Central Park Conservancy
and
Rockefeller Center, Inc.

cordially invite you for "Coffee and [illegible]"
marking a major phase
in the planting and restoration of
The Conservatory Garden
in Central Park

Tuesday, June 22
10:30 a.m.

The Untermeyer Fountain
Conservatory Garden
Fifth Avenue at 105th Street
Kindly respond (212) 489-4300

In the event of inclement weather, the ceremony will be held on June 23

Chapter II

Mapping and Orienting

> *"go dnow to the end of the block and across the streete and walk two block then cross the street again. Then you walk a little way and you ture Walk the path and tell you see the ball base court and my tree is the very small tree. The end."* Sarah

Mapping has to do with visual understanding; sequence memory; landmarks; later, schematic representations and symbols. Use a variety of experiences to help children develop their sense of place, of direction, of route. Then work on pictures and aerial views or "maps" of regions they know well.

Work from concrete experience. Do not immediately try to have children create maps. They need extensive experience with what they perceive.

Incorporate mapping experiences in your study, or work specifically on mapping for a time. Make a large park map that you can use throughout the study.

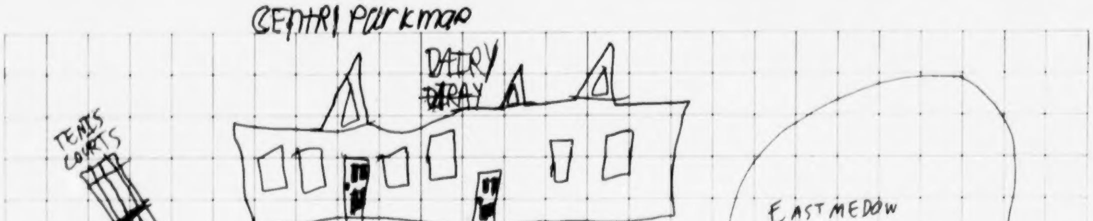
Main Ideas

Maps are aerial pictures that represent places.

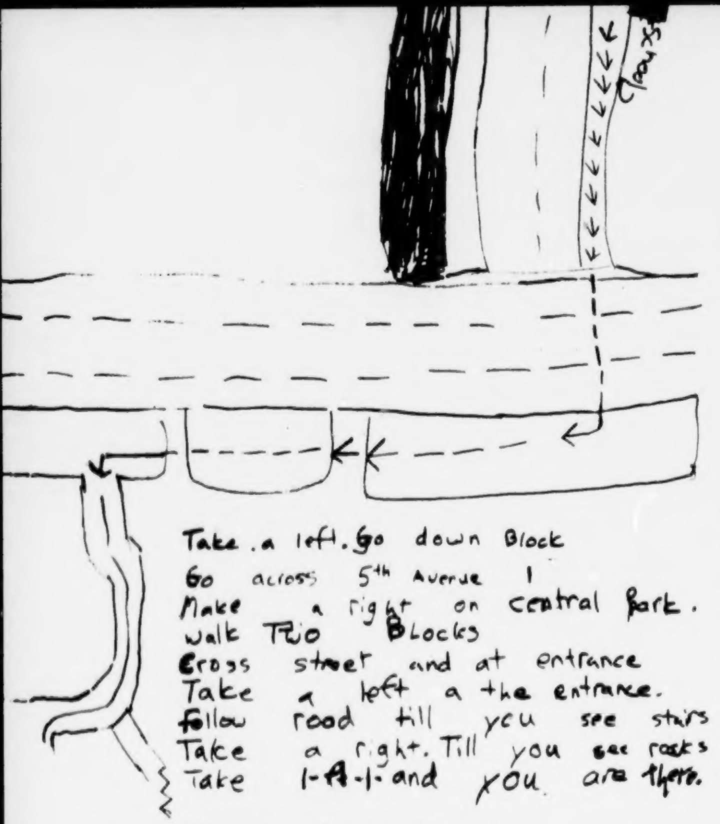
Maps can tell you "how to get there" and "what is there."

Maps carry different kinds of information in pictures, labels, and symbols.

Children can make maps from observations.



Dike



Take .a left. Go down Block
Go across 5th Averue !
Make a right on central Park.
walk Two Blocks
Cross street and at entrance
Take a left a the entrance.
follow rood till you see stairs
Take a right. Till you see rocks
Take 1-A-1- and you are there.

Mapping Suggestions

- Use frequent walks for orienting. Call attention to what you see. Use words for directions, landmarks, distance. Ask children to narrate the route they have taken on a particular walk.
- Use simple, teacher-made maps extensively. Children need many experiences of seeing schematic representations and aerial views.

Make maps for trips, so you can trace where you are going. Show children different kinds of maps; your own drawn maps, aerial photographs, picture-style maps. Talk about what kinds of information can be shown in maps.

As you adopt an area, make a simple map for each trip. Make fill-in maps on which children can enter two or three features.

- Ask children to tell or write directions for a walk or short trip. (See the example at the beginning of the chapter.) Help them to establish the sequence of the trip and to use landmarks. A simple trip sheet might be helpful with some groups. We leave school and walk ______. We walk ______ (how far?) to the park. We turn ______. At the ______ (landmark) we go west into the park.
- Collect aerial photographs and discuss them to help develop the concept. Take children up to a high window and look down. Talk about landmarks and about how a picture of the area below would look if drawn from up there.
- Use treasure hunts and other games to develop understanding of direction and route. Make activity cards to go with your maps of the park and other trips. Create simple maps with fill-in questions (where are the lampposts? the garbage cans? the mailbox?).
- Have children make models. For some children it is easier to work with materials than to do two-dimensional drawings. By making models with blocks, cartons, cardboard, and found materials, children can make discoveries about placement and relative size. (Make models of the classroom, of classroom furniture, of children's rooms, and so on.)
- Work toward mapping from models. Set up doll furniture on a tabletop, or a configuration of furniture in the classroom, and have children make a map or picture of this.
- Encourage children to bring in different kinds of maps. These may include architectural blueprints, satellite-photo weather maps, technical drawings, and road maps.

Make a map display in the classroom. Ask students to tell what kinds of information maps can provide. Talk about how information is shown on different maps.

- Make a series of activity cards to accompany a simple atlas. Each card might ask five or six questions about a particular map. This will stretch reference skills as well as map reading abilities.

Lead gradually from experience and teacher-made maps to children's own mapping. Making their own maps is the culmination of a series of learning experiences.

Reading maps

Use a neighborhood map of one or more city blocks, with shops and businesses labeled and symbols for mailboxes, fire hydrants, telephones, and any other features. (Create a new one, or use a map from a previous trip.)

Measuring

Do measuring exercises. Measure the lengths of paths in your park area using measuring wheels. Have children measure the walls of their classroom, the sides of their desks. They might use the wheel to measure the block, to find the dimensions of main buildings, or to determine the distance between lampposts.

My Wall is the Wall that has the loft on it. and I made the pictures and made the paper shelf that has lego and bricks. That is all I made on the loft wall. The people that did most of the Wall are Laura and Sarah. This is how I made the pictures. I cut out a square piece of paper and I copied the picture from the wall onto the little piece of paper that I cut into a square. This is how I made The paper shelf. I cut out a rectangle cardboard piece. Then I sawed three pieces of wood and shaped clay and then I glued the clay to the wood and the cardboard and that's all I did on the loft wall.

Thomas

Scale Drawing

Note: Do not get hooked on making scale drawings, especially early in your mapping work. It can be difficult and frustrating. Instead, begin by recording measurements on tables or charts.

Do a scale drawing of something that is simple, such as a single window or a desktop.

Enlarging Maps

Help students enlarge a map using a grid. (See instructions on page 69.)

If appropriate, make a large map of the area around your school. Help children find their homes and connect them to the school with colored yarn. Children could also indicate the routes by which they come to school with yarn or felt markers.

The Big Map

Once you or your group has made a Central Park map, keep using it to record information.

Keep a map of the whole park, and have children color in the areas they have visited. They can write group stories about their experiences for a related map/park book.

Other kinds of maps you can make and use:

- *bird-watching or animal maps (mark sightings of birds, animals, tracks)*
- *tree maps (label individual trees in an area as children identify them)*
- *adopted area map (prepare a large outline map of your adopted area and have children put in trees, park furniture, paths, special rocks, and other features; add landmarks that figure in your adventures)*

Create games and activity cards to go with your large park map. Start at B1. Go south to the pond. Turn and go east three squares. Where are you?

Make a simple worksheet: What stores are next to the laundromat? How many telephones do you see? Write in the street numbers. Where is the mailbox located?

Give children individual copies of a park area to be explored with a similar worksheet. Have children do the map exercise before they visit the park. During the park visit they can add new features to their maps.

Do map puzzles and games. Make maps of two or three school rooms with which the children are familiar and have them guess which room each map represents.

Symbols

Prepare outline maps of the street school is on. Take the class on a walk along the street. Have children add items such as garbage cans, street signs, parking meters, and mailboxes to their maps. Have them label the streets; perhaps write in building numbers. Back in the classroom, share the picture-maps. Discuss ways of representing items. Lead up to the idea that you can use symbols rather than labeling everything. Make similar maps for a whole square block. This time, help them to make symbols and a "key" for their maps.

Aerial Picture

Use dollhouse furniture to set up mapping exercises. Place furniture on a tabletop. Then show an aerial view of the space.

Sensory Map

Conduct blindfolded exercises: have children feel objects on a desktop and then, with blindfold removed, draw a map of what they felt. Do the same with some familiar household and school facilities. Map a sink area by feel, a table setting, the top of a cold stove. Children may draw maps from memory; or they may need to see what they are drawing.

Standard and Nonstandard Units

Experiment with nonstandard units of measure. Have children measure the classroom with foot lengths. Make a large chart of how long and wide the room is measured by each child's footsteps.

Then discuss this: If Jossie says the room is 25½ steps ("feet") long and Aran says it is 19½ steps, who is right? And what do we know about the room? Develop the idea that a standard unit helps everyone know what is meant.

A quart of milk is a known quantity; a pitcher of milk is not. It could be a gallon pitcher, or a tiny cream pitcher. Use this and other kinds of measure to develop and reinforce the idea of the need for standard units.

Chapter III

Parkworks

Central Park is not an accident, nor simply a nature preserve. It was planned to protect landforms and wildlife, and to help people enjoy these things. Like a building or a neighborhood, Central Park has a structure and working parts. It offers a simple model of how a community works.

Help students discover the structural parts of the park and understand their importance in keeping the park healthy and usable. Let them see what people do to keep the park thriving.

Help children to see what materials things are made of–benches, walls, gates, fountains, paths. They can feel texture, do rubbings, see how material and form make each structure work to its purpose. They can look to find evidence of changes caused by time–the wearing of stone, weathering of wood, breakages that must be repaired.

The park can also be seen as a living organism that grows and changes. It needs its trees pruned, its hedges shaped, its paths edged and cleared. It needs to be cleaned, watered and fed.

Children can participate in the joy of clearing an adopted area, or planting bulbs and enjoying their flowery show in the spring. They can care for trees and shrubs by mulching or feeding.

Main Ideas

Parks have structures and systems, paths, benches, shelters, playgrounds, fences, litter baskets, water systems, lights.

These facilities were created to meet people's needs and to keep the park healthy.

People work to keep parks healthy and attractive. Communities give money every year to maintain their parks.

Parkworks Walk: Teacher Preparation

Walk through the park and note structural features. What are the built elements in the park? Why are they needed? What materials were used? How are they maintained?

Plan a walk for your class that will show them a variety of structures and services. Make a simple map showing the route from your school and the course of the walk, marking landmarks and interesting observation points.

If you wish, prepare trip sheets. You may create identical sheets for all students or separate sets for two or three teams.

Parkworks Walk: In-Class Discussion

Ask: Did you know that people made the park? What clues do we have?

Make a list of children's responses and save it for the Park Book. Help children think through the purpose of each feature.

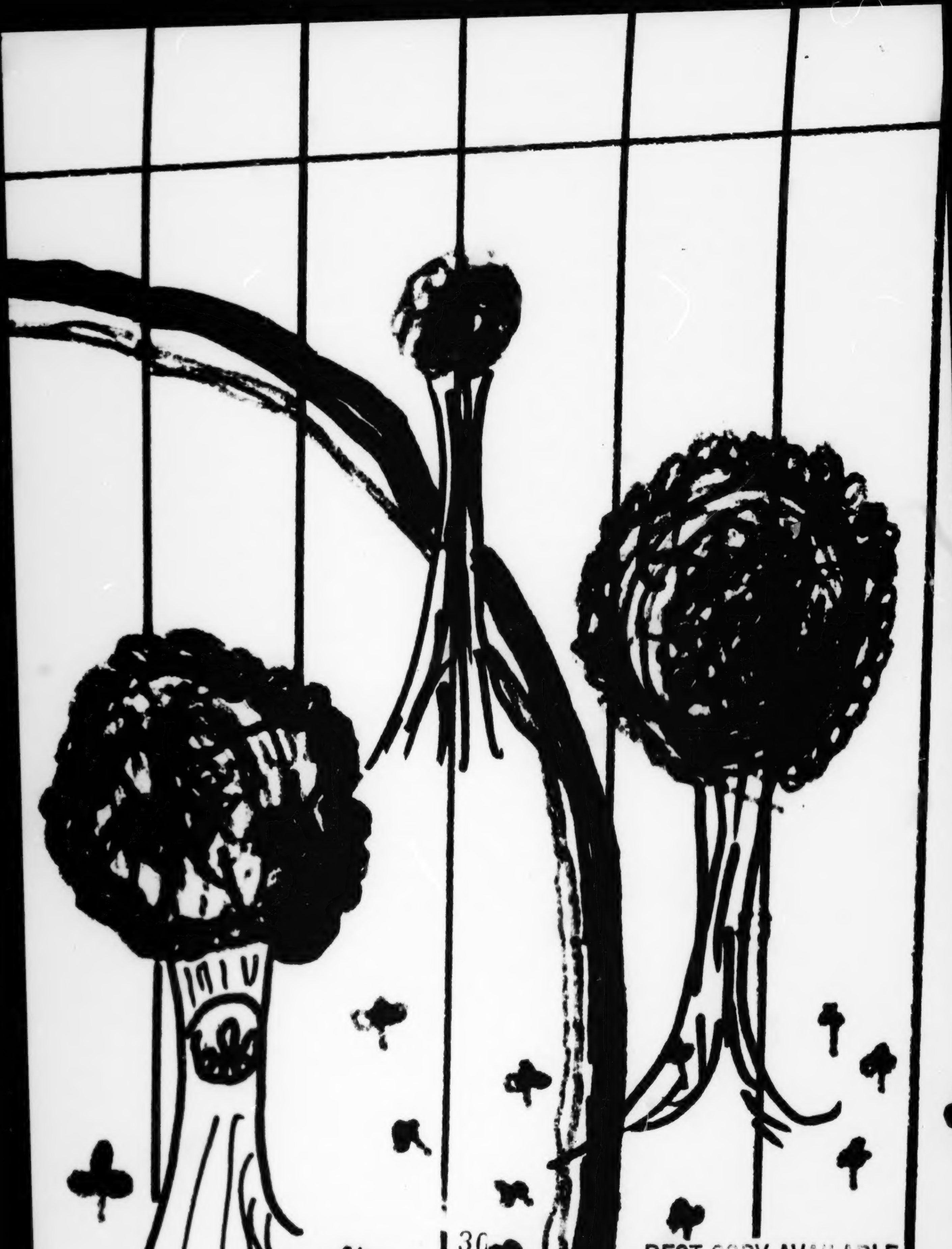
Tell students that they will be taking a walk in the park to find more information about the people-made parts of the park. Make a note of children's questions and special interests. Go over the map of the route so children will be able to identify landmarks while on the walk.

Parkworks Walk: The Walk

Use trip sheets, or ask children later to draw and name the things they saw that are man-made parts of the park. Use questions to focus their attention and orient them: What is at the entrance? What tells you where the edge of the park is?

Interview any workers you see. Help children ask their questions: What are you doing? Why? What equipment are you using?

tHE RAIL FENC
LOOKS GOOD Wi
tHE BACKGROL
tREES AND FLO
tHEN tHE CARS
WON't FALL OF
tHE HIGHWAY
anika



Write down the children's remarks to help with further study: Why is there a culvert? Why did the water level change? Does someone fix broken benches? Why are there different kinds of path surfacing?

You may want to do more than one walk to explore the different aspects of the park: water and water systems in the park; how park workers maintain the trees and gardens; park furniture.

Parkworks Walk: Trip Sheet Suggestions

Trip to The Dairy

Pair up with one other person and fill out this sheet

Name John

Name Sam

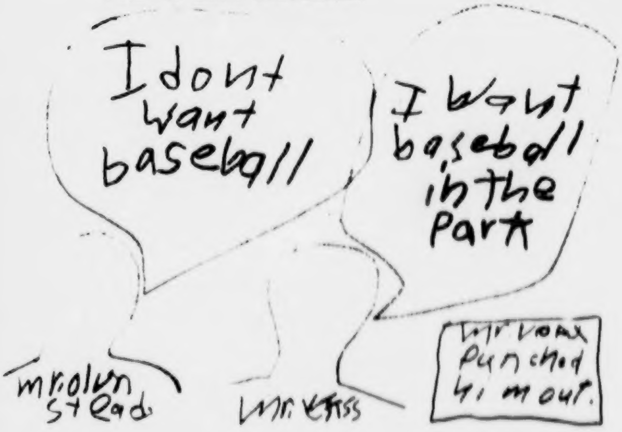
1) Look at all the photographs on exhibit. Draw or write down as many activities as you can find that people are doing in the park. (Example--jogging, flying a kite) Put your answers in this box.

waking, sleping, coming, drinking, [illegible], resting, reeding, smoking, [illegible] waking dogs, waking in the soo,

2) Find the picture with the frisbee player. Write down where you think that picture was taken in the park.

Bethusda fountain

3) Find your favorite photo that has at least two people in it. Make up a conversation that the people might be having, and write it down. Use your imagination and write four or more sentences.


I dont want baseball
I want baseball in the Park
mr. olvn stead
Mr. Kriss
Mr voax punched 4i m out.

Tools

Do you see tools in the park? Draw or name the things you see. What are they used for?

Signs

Draw the shapes of some signs you see. Copy the words. What is each sign for?

Parts of The Park

benches
water–lakes, fountains
statuary
walls, fences, railings
paths, roads
lights
drainage–culverts
buildings

People and Jobs

park foreman
maintenance workers
gardeners
litter pickup
electricians
horticulturist
carpenters
masons
plumbers
tree specialists

Equipment

trucks
shovels
ladders
axes
rakes
pruning shears
saws
baskets

Things to Do After a Walk

Share discoveries. Write each item on a large card or piece of oak tag and use later for games, spelling, and so on.

For each item, ask: Why is it in the park? Discuss why each item (a fountain, a culvert, a fence) is needed, and help children write about it.

Make a class collage or mural.

Use the word cards you made in a classification game. Ask children to group the items: Which ones belong together? Why? Children may discover many ways to group the items: things made of metal, things for safety, and so on. (If children mention vendors, ask: Do they work for the park?)

Make a matching game, with one set of picture cards and a corresponding set of word cards.

Continuing the Study

What interested your children most? What questions did they have? What confusions need clarification? Children may want to do work with electrical circuits, or find out more about water and water systems. They may prefer to draw or make models of structures they have seen.

Choose an area of concentration and write your objectives. What general understanding do you want to develop? What specific knowledge should children gain. Plan trips, interviews, and other experiences to develop understanding. Choose from the following activities to enrich your study.

Mapping

Provide individual line maps of a manageable section of the park. Have the class devise symbols for different features. Mark the route, and take a walk to gather information. Help children place symbols for structures and landmarks correctly on their maps.

You may also work with the whole class, using a large map and placing symbols cut from colored paper on the map. Small teams might investigate different areas or features.

Charting

Compile a chart of facts and figures about your chosen area. Use the map to define an area, and have teams of children count different items and enter their findings on the chart. Discuss the findings.

How close together are the street lamps? Why?

How many litter baskets did you find?

How wide is the path?

How are charts and maps different? What kind of information does a chart give? What does a map tell?

Jobs to Do

Park maintenance involves some surprising jobs! In 1982 a bank gave money to clean the graffiti off Central Park's statues, walls, and buildings. A group of workers used chemical paint removers and sand blasting to remove 14,000 square feet of graffiti. Only 900 square feet returned after the cleanup.(Explore the meaning of "square feet." Graph to compare 14,000 with 900 square feet.) Craig Castleman, an expert in historic preservation who worked on the project, said, "If you keep on top of graffiti, the graffiti will go away." Craig believes that graffiti artists get discouraged when their work disappears.

Many other jobs are done regularly to keep the park clean, and to keep the plants and animals flourishing. Help children realize the work it takes to keep a park functioning. Meet with workers, learn about what they do and how they feel about their work.

Arts Activities

Have children draw pictures of park people doing jobs to maintain the park.

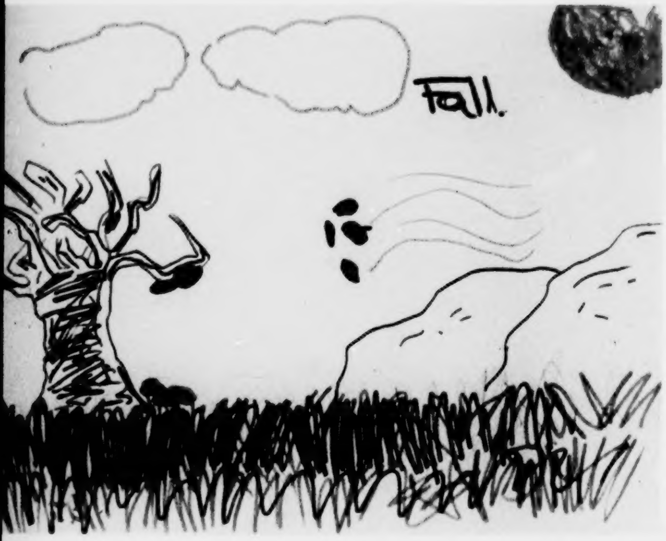
Have children make drawings of tools, and make word cards to accompany them for a matching game. Cards could tell names or functions for the tools.

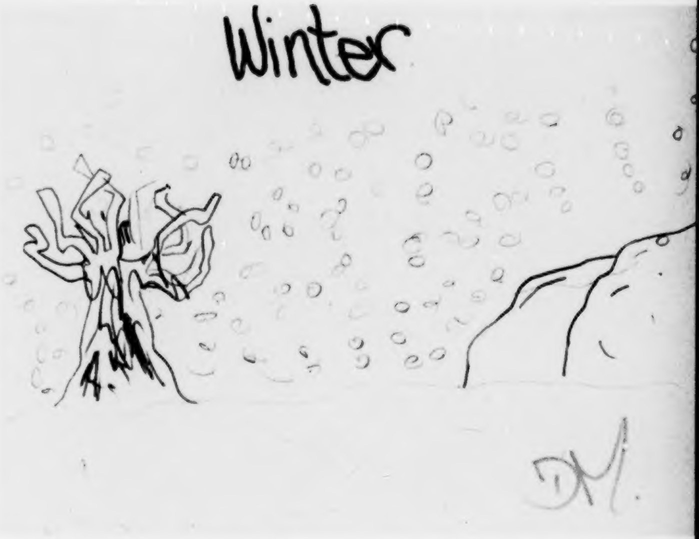
Writing

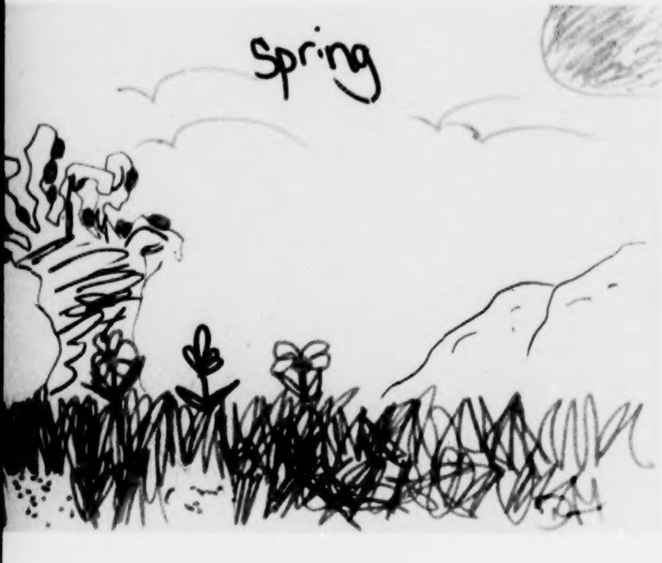
What if the park weren't planned?

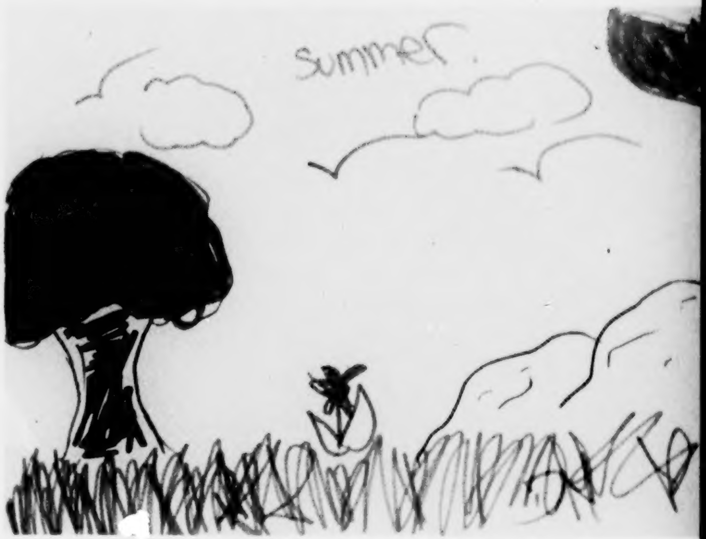
What if nobody worked to keep the park? What would we see? How would you feel?

Discuss these questions. Then have children write giving their opinions and feelings.









A Park Calendar

Discuss what the children already know about each season, and list their guesses about what seasonal jobs might be. The park foreman or horticulturist would be good to interview for the answers. Children can verify guesses and enter the seasonal jobs on the calendar.

What do park workers do in the fall? Why? What would happen if they didn't? (Repeat for other seasons.)

Vocabulary: **mulch, prune, cultivate**

The Dirty brown Water
in Summer.

piles of Leaves near
the Water in fall.

The icy water and
the Drifts of Snow in winter.

in Spring the water
get's Clear with all the rain

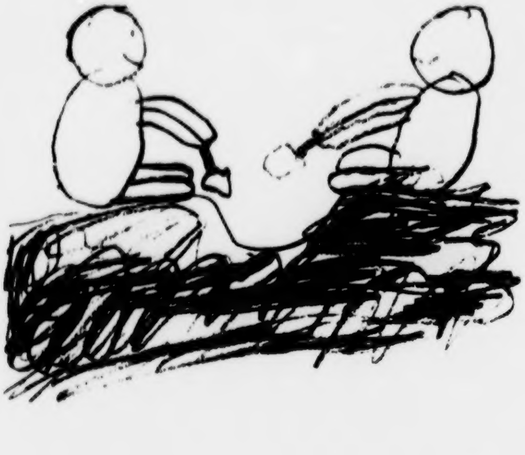
By RUFUS

Planting Bulbs on our Adopted Land

On November 2 our class went to central Park to adopt a piece of land. The land is between 95th and 96th St. and just below the reservoir. We went with Laurie a Central Park intern. We planted many tulip bulbs on our land. There was lots of grass, roots, and rocks. We went there because our class is studying Central Park and we went see how tulips grow. IT is fun if you are curious about nature.

Planting

Get permission and instructions on bulb planting from the Parks Department. There may be a scheduled planting project in which your class can participate. Plant in October to create a beautiful spring show!



Litter Pickup Project

Find out the park's schedule for litter pickup, and get information on what your class can do to help. Children can do a cleanup of their adopted area or a reconnaissance walk to discover what areas need attention.

Write out a simple statement or list of the jobs and divide the class into teams – for example, raking and bagging leaves; picking up litter, stacking branches and natural debris.

Equipment: brooms, heavy-duty trash bags, rakes, square-ended shovels, gardeners' gloves.

Have children record their clean-up project. What did we see? What kinds of litter did people leave? What tools did we use? How did it feel when we finished the job?

Recycling Leaves

Your class can help create new park soil! Make a compost heap with a layer of leaves about 4 inches deep, a thin layer of soil, and then a little fertilizer. Add another layer of leaves and another of soil and fertilizer – as many as the children have energy for. At the top of the pile, make a hollow to catch rain. Every two weeks or so, have a small team use a leaf rake to turn the pile. Keep a running log on how the leaves look and what they feel like each time. Children will see leaves decompose into rich new soil.

Putting Trees to Bed

Children can help keep surface soil around trees and shrubs warm in winter by mulching. This protects the roots from repeated freezing and thawing and helps retain moisture. Use leaves or wood chips. Spread a layer over exposed soil, not grass, around a shrub or tree. Do not spread right up to the trunk, because wet leaves will rot the bark. In Central Park, a wonderful machine makes mulch chips from pruned branches.

Other Projects

Call or write the Parks Department and find out what other jobs volunteer groups can do in the park. The Parks Council in New York City publishers a Volunteers in Parks book that tells how to do many projects. Some possibilities are:

fixing paths – adding gravel or chips
feeding trees
stream and pond cleanup
playground work – painting game lines
planting for erosion control and beauty

Designing a Park or Park Model

Making a model of an imaginary park, or of part of your park, is a good final activity in this study. Children can have a wonderful time incorporating all the information they have gathered into a model. Begin preliminary discussions now; continue to add to the list of things that parks need, things children want to include in their model, and so on. See Design, page 52, for trip ideas and questions that will prepare them for making a model. Here are some things to consider for a park model.

What will you put in your park? Why?

What does it need to stay well? (Water, drainage, regular cleanup, mulching, pruning.)

Observe: Paths, their shapes and surface texture and material. Where do paths go?

Park furniture: name important items; why is each needed? Have students do imaginative drawings of park furniture – their own designs!

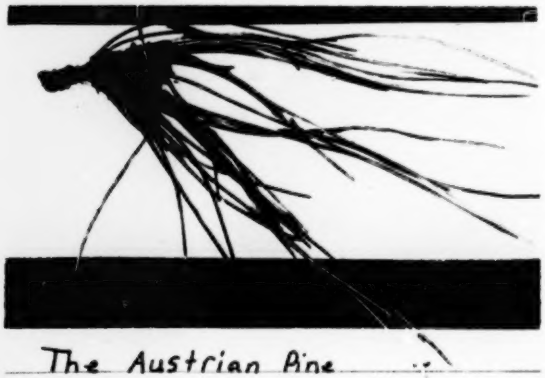
Signs: What signs will your park need? Draw new designs for some signs.

Thank you
love Flore

Chapter IV

Nature Study

Nature study in the park can go on all year round and involve many different plants and animals. It is impractical to outline here all the possible activities, or even all the lines of inquiry. What this guide does is suggest some principles, some areas for investigation, and some basic activities.



The Austrian Pine

The Austrian pine has long pointy needles. There are two needles in a bundle. The thiek bark protects the tree The bark is like a rough jigsaw puzzle. This pine has sticky juice called pitch. They use the pitch to heal their wounds in the cold weatner. The tree looks very tall.
By Roberta.B, Alex.F.

There is a vast number of fine books on nature study. Some of these are listed in the Bibliography on page 70.

One of the main purposes of nature study is simply to enhance children's appreciation of nature. Nature study is also valuable for developing skills in close observation, vocabulary, and description. Thinking about natural events generally motivates children to ask questions, to make connections and inferences, and to develop understandings about causes and relationships. The natural world provides appealing and nonthreatening content for building children's thinking capabilities.

Nature study should be thought of as an exploration, not as an experiment. Keep it open. Expectations of particular conclusions or results are likely to be disappointing.

Experiments should be things that you have tried; things that can be set up in the classroom where you can control the variables and get some meaningful results. Examples are comparisons of sand, clay, and humus to see how quickly they absorb water; how fast water evaporates; or the relative weights of a specific quantity of each type of soil. You might experiment with growing conditions – planting several pots of bean seeds and varying the conditions, such as sunlight or watering, under which they are left.

Three basic questions are:

What do we see?

How are things related? (Which seeds and fruits belong to which tree?)

What can we learn from this? (Different plants propagate differently; how animals and birds help seeds travel.)

Main Ideas

Seasonal changes: *day length and the lives of plants and animals in the park change over the course of the year. Sequence, specific changes (leaves coloring and falling, animals hibernating), and why they occur.*

Systems: *a tree, for example, has many parts, each with its function for keeping the organism alive (roots, trunk, bark, branches, leaves, seeds, fruit).*

Diversity: *a wide variety of plants and animals thrive in the park. Individual plants and animals grow best in particular environments. Children may learn to recognize those plants that thrive in marsh or pond conditions and those that prefer lighter, drier soil and more sunlight. They may learn that animals have preferred foods and organize their lives so as to have these foods available (squirrels, nuts; birds, seeds).*

Adaptation: *different plants have different ways to propagate and deal with special conditions (deep roots to find water in dry soil; winged seeds or seeds that stick to animals' coats to make new plants). Animals also have different ways of adapting (frogs have a skin that enables them to live in water).*

Ecology – I: *different kinds of habitats can be identified and described: meadow, woods, pond. Different animals and plants live there – different soils and sunlight.*

Ecology – II: *birds and animals eat plant seeds and also spread them for replanting. Earthworms constantly cultivate the soil as they go about their lives.*

Environmental protection: *people and their actions have effects on the park environment. These effects can be good or bad. Children can observe attempts to stop erosion, to prune dead branches, and to replant, as well as the detrimental effects of trash and overuse of delicate terrain.*

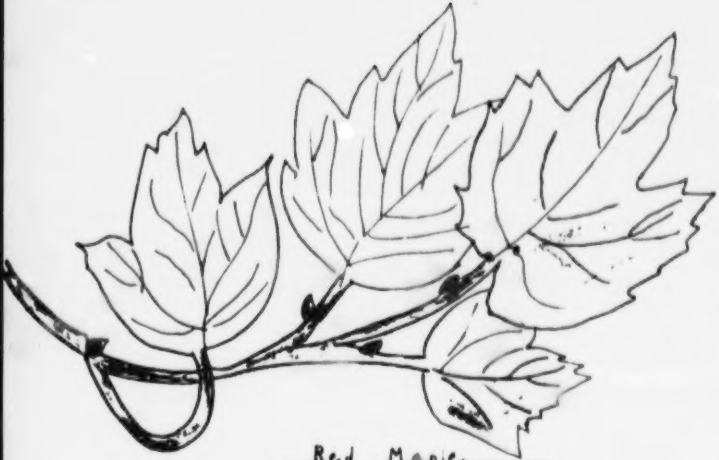
Water: *water is necessary to all living things. Children can learn how different organisms use it. Children can learn about the rain cycle and observe it in miniature in a classroom terrarium. They can experiment to discover some of the properties of water.*

Beginning a Study

You may want to do several nature studies of different kinds over the course of a year. Choose two or three topics that you find interesting.

Here are some suggestions:

Birds
Worms
Leaves
Seeds
Trees
Insects
Weather
Soil
Animals
Rocks
Water



Red Maple

This leaf is a simple one.
Simple means one leaf one bud.
These leaves have pointed
lobes. These leaves have veins
to make food for the tree.

Techniques

Observation. Lenses will enliven observations. Have children keep records – written observations on trip sheets or experience charts, sketches.

Description. Encourage children to find words for their observations. Keep word lists and collections of writings. Have children write along with their drawings and collections of objects.

Questioning. Use your main idea to develop questions that will require children to think. Write these down. Add children's ideas and questions, and pursue them. (What are the tree's parts? What is the life story of a tree? How does it begin?) With a record of the questions and children's ideas, you can evaluate their understanding and plan further study.

Research. Find a few clear source books and keep them on a classroom shelf – for example, tree and plant books against which children can match leaves that they have found.Then they can compare their trees with the illustrations of tree shapes, fruits, and seeds. Bird identification books will make bird walks exciting. Other sources will give information about how plants grow and make food, or how animals live in winter. (See Bibliography on page 70 for a selection.)

Using source books, write a paragraph for research. Then write a series of research questions. Read aloud, to answer them.

Treasure Hunt

The Treasure Hunt and the Microground Study are activities that will help identify children's interests, feelings, skills, and needs. You may repeat them in different areas and in changing seasons.

Display the findings. Cover a large table or shelves with butcher paper or photographer's seamless paper. Lay out the collected treasures: leaves, seeds, twigs, rocks. Have the children write labels: "Lauren's leaves," "Oak leaves," "chestnut," "ash seed."

Use reference books to help identify items.

Select a few colorful textured items for a discussion of words and sensory experience. Display each leaf, seed or fruit, and ask children for words that tell about them. Encourage them to smell things, to look at them. Make a list of the words: prickly, glossy, red, pointed, nutty-smelling. Post each object on a sheet of oak tag with the descriptive words next to it.

Have individuals write their own sentences. Post their writing with the object.

Microground Study

For this activity, do preliminary research to find an area that is accessible and provides a rich variety of plants, rocks, textures and terrain.

Consider doing more than one such study in different kinds of areas. Children might compare the open sunny meadow they studied with a dark marshy or woodsy area. Objectives:

To see the variety of soil, rocks, plant, animal, and insect life. (Questions: What plants grow there? What insects do you find?)

To sharpen vocabulary skills. (Children learn words for leaf shapes, textures, and soil types.)

To make connections. (How might these things be connected? Why do you think you found those seeds here?)

To develop a sense of interconnectedness. (The insects use the plants for food. Worms cultivate the soil.)

To develop questions and identify lines of investigation. (Why are the seeds shaped that way? Why are there different kinds of roots? How is soil made?

Materials: heavy twine, stakes, collection bags, labels, magnifiers (glasses or plastic loupes).

Organize children in groups of three or four, each with a supply of twine and stakes. Help each group stake out an area about 4-foot-square, and connect the stakes with twine. Give children a focus with which to begin: find and describe (or sketch) five different plants. Find three kinds of seeds.

Children will find other items as well. Encourage them to observe the ground closely, and list what they find.

Listing helps focus attention and forces children to name and describe: long grass, shrub with rounded leaves, silver-green creeping plant with red stems.

Guessing where things come from leads to making connections and using existing knowledge. Children may know that a cone must come from an evergreen; they can do "research" to find which nearby tree has a certain kind of seed.

Use the ground study to point out how many different kinds of plants and insects inhabit a small area. Examine the texture of the soil, to collect different kinds of rocks, bring back soil samples in small plastic bags or bottles.

In the Classroom

Use magnifiers to examine findings: soil texture, rock surfaces, veins of a leaf or webbing of a maple seed.

Each group can show what they found by making a list or map on butcher paper. Lists should include information about where things may have come from. What is the name of the tree with the winged seed? The cone had tiny seeds inside it. The prickly round thing dropped hundreds of tiny seeds when it dried. These seeds stick to your clothes.

Help children use source books to answer questions and identify plants.

For a comparative study of two kinds of terrain, children might make a poster listing their findings for each study: kinds and numbers of plants, shrubs, trees and insects seen; degree of light and moisture; kinds of soil and rocks.

Sketching

Assign sketches to aid in nature study. Have children sketch tree shapes; different kinds of seeds; leaves of trees, shrubs, and grass. Note that while you can't pick blossoms and leaves in the park, you can *collect* things by drawing.

Study naturalists' sketches to see how carefully they draw animals and birds in natural settings. How they show the different parts of a plant. Use sketching to sharpen perception.

Seasonal Change:

Observing the park over several months develops children's understanding of this important concept. It also intensifies their appreciation of the beauty of nature in different phases.

Observing the park in its different guises helps children to feel a personal relationship with the park, and with nature.

What changes happen in the autumn?

Day length shortens.

Light angle changes.

It gets colder; people wear more clothing.

Heating systems go on inside buildings.

Sports change, from tennis and baseball to football, basketball, and hockey.

Leaves turn color and fall.

Park Walk

Collect five leaves you like.

Sketch one tree as it looks now.

Describe the weather today: temperature, wind, sunlight, clouds.

Observe what birds and animals are doing.

Discussion

What is changing in the park?

How do you know?

What do you think will happen next?

How do people change their behavior in the autumn?

You are asking children to observe, to call on their past experiences, and to make predictions.

Help children do research:

Why do leaves change color?

Why do they fall?

What happens to the trees in winter?

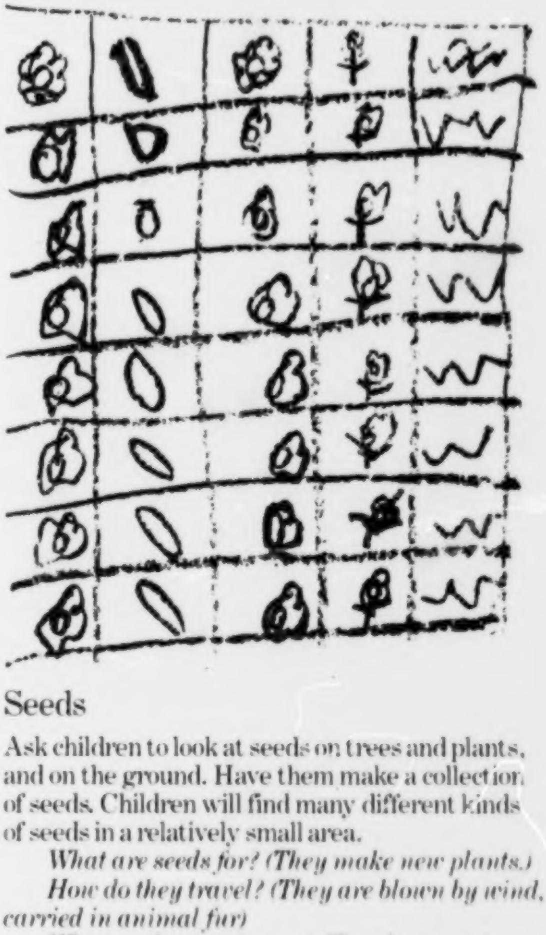
What happens to the birds? the animals?

Collect resources to support an investigation. (See the Bibliography on page 70.)

Planting

If children want to plant some of the seeds they have found, the seeds should first be refrigerated for a month. This simulates the cold weather they would encounter outdoors. For each pot of seeds they plant, children can glue a few sample seeds to a popsicle stick to serve as a label.

The CONSERVATORY GARDEN.
IT IS A VERY BEAUTIFULPLACE!
YOU CAN PLANT FLOWER There and
you might see a rabbits!
Watch out rabbits like Flowers.



Seeds

Ask children to look at seeds on trees and plants, and on the ground. Have them make a collection of seeds. Children will find many different kinds of seeds in a relatively small area.

What are seeds for? (They make new plants.)

How do they travel? (They are blown by wind, carried in animal fur)

Why are there so many? (The plant needs to ensure that some of its seeds will be planted and germinate.)

Adopting Twigs

One way to study growth over time is to adopt twigs. Begin in late winter. Have teams of students select twigs of the different kinds of trees in your area, and have each team tie a colored ribbon at the base of their twig for identification. Each group can measure the length of the twig and do a careful drawing from late winter through late spring. Have them also write what they see: color, shape, size of the buds. Are they smooth or sticky? What happens?

They will see the growth, budding, leafing out or flowering of a tree.

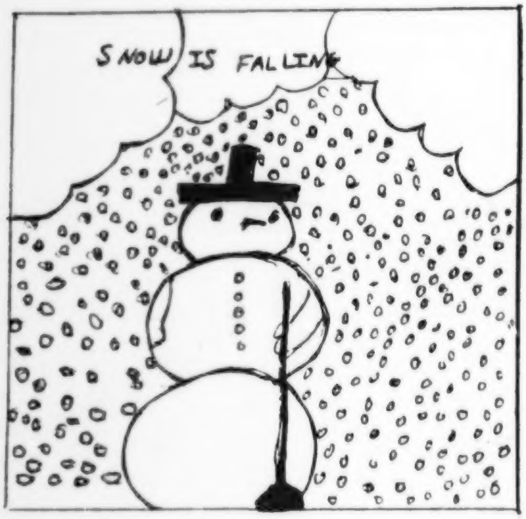
Spring

Have children do careful observations of their adopted trees or area.

Have them look closely for renewed animal activity. As spring progresses, they may see birds building nests, young birds that are distinguishable from their parents by their smaller size and more sober coloring.

Research might be concentrated on how seeds germinate; young plants grow; buds blossom and produce fruit.

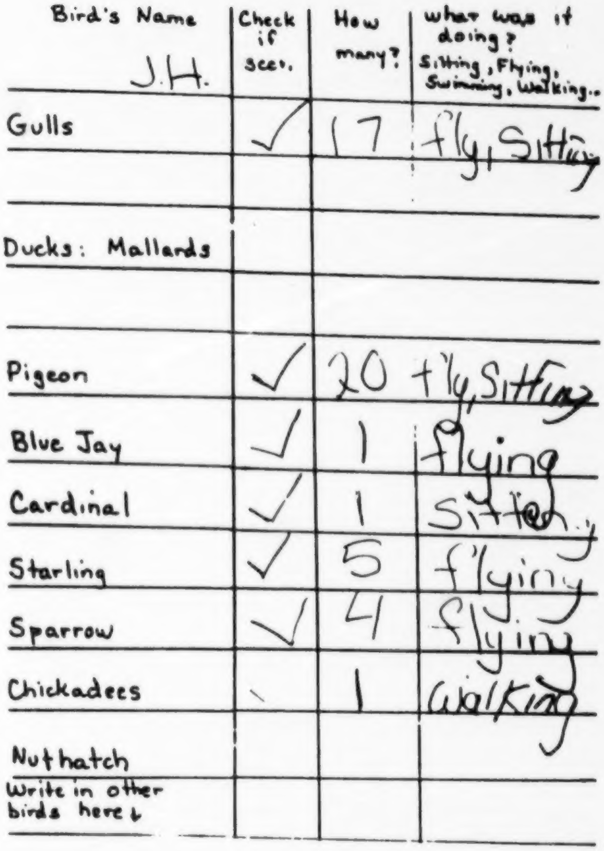
Spring is a wonderful time for poetry. Encourage children to notice smells, sunlight, and air. Help them to describe what they experience.



Winter

Discuss how people live in winter. What are special problems? How is life different from summer time?

Ask the children how they think animals deal with the winter season. Take a walk in the park and look for clues to the animals' presence. Look for tracks, droppings, places where animals have burrowed; built nests; left cocoons on leaves, webs in branches, feathers, fur.



Bird's Name J.H.	Check if seen	How many?	what was it doing? Sitting, Flying, Swimming, Walking..
Gulls	✓	17	fly, Sitting
Ducks: Mallards			
Pigeon	✓	20	fly, Sitting
Blue Jay	✓	1	flying
Cardinal	✓	1	Sitting
Starling	✓	5	flying
Sparrow	✓	4	flying
Chickadees	✓	1	walking
Nuthatch			
Write in other birds here ↓			

Birds

Children can observe bird behavior, note what they eat, the squabbles they have, how many different kinds are in a tree. Children can listen to birds and imitate sounds.

They can draw pictures and note identifying characteristics. They can use bird books and do research on the birds' habits. They can observe how birds cope in the winter, and make feeders near a classroom window.

Many birds live or visit the park. They have certain needs (food, water, shelter. . .). Children learn how they meet these needs. Identify human needs and compare them with those of birds. Which needs are similar? Different?

Observing birds shows interdependence between plants and animals. (Birds find food from plants and insects; they use trees as places for nest building; they use grass and other plant materials to make their nests. They also help by spreading seeds and killing damaging insects.)

Choose a particular lookout. (The Ramble is wonderful.) Visit every week or so, and have children observe. They may count birds, sketch, note bird-calls, observe what birds do. Try one visit at a different time of day, and note differences in bird behavior:

What do birds need?

How do they provide for themselves?

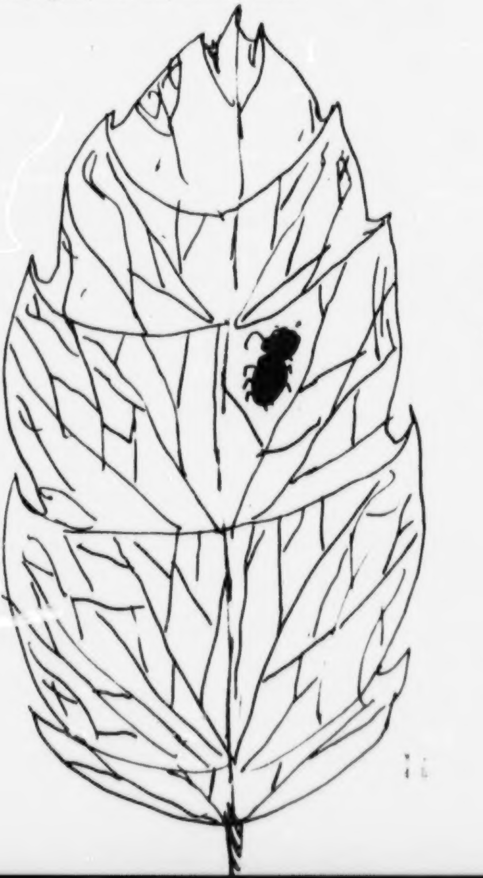
What do you see them do?

How do birds affect the environment?

Animals

Visit different areas: a meadow, the Ramble, a pond or lake edge. Ask children to describe the terrain and the plants. They should look for squirrels, birds, and insects. How do squirrels behave? Ask them to note the different kinds of birds. What are they doing? Have children look for evidence of animals eating – broken nutshells, stripped cones. They may also find owl pellets or rabbit droppings.

Compare observations of different areas. Observe the same area several times to see seasonal change or to note what is happening at different times of day. Note temperature, wind, light, clouds, and sounds.



Trees

Having chosen a tree, a team of children can collect leaves, seeds, fruit, bark rubbings. Have them make drawings of the tree that show its shape. Later, they can make sketches of the tree in winter – the "skeleton" without the leaves.

Use tree identification books to help children gain more information about their tree. How do its seeds travel? What conditions does it like? Where does it grow? They can learn about the different leaf shapes. They will observe that all the leaves on a particular tree have the same shape, although they are different sizes and levels of maturity. Have children make a display of their findings: the parts of the tree and their version of what they know about it.

Learn the life story of trees: how trees grow, use water and soil nutrients; how leaves turn sunlight and nutrients into food; how leaves turn color and fall; how trees winter.

Tree care

Invite a tree surgeon or horticulturist to speak to your class about tree care and diseases in trees. They will learn about the pruning of dead or excess branches, and that an oozing opening in a tree's bark is a "wound" that needs to be treated.

Trees as Apartment Houses

Have children observe and record all the different insects, birds, and animals that live in a tree. They can learn how these living things depend on one another. (Insects eat wood or bark, or other insects; birds eat insects, seeds and fruit; birds and squirrels carry seeds that grow new trees.)

How Trees Serve the City

Ask the class to tell what trees offer that makes life in the city pleasant. Trees give shade, greenery, a pleasant scent; they are windbreaks; they release moisture and oxygen into the air; they purify the air; they screen off the angular sight of midtown buildings; they help absorb sound; they are beautiful to look at.

It took 7 of us
to get wound my tree
It was so big

Rocks

One of the striking visual features of Central Park is large outcrops of Manhattan schist, the bedrock on which this island of skyscrapers is founded. Take children on a walk that winds among rock formations, and ask them to describe what they see. They may note the outcroppings seem to slant, running diagonally across the park from the northeast to the southwest. Observe deep grooves or scratches along the rocks that go from the northwest to the southeast, cutting across the grain of the rock. These grooves were made by glaciers that moved across the land long ago, carrying clay, sand, gravel, and bits of rock. In some places children may notice examples of "glacial polish," where the glacier wore the rock face smooth.

Ask children to look for evidence of weathering and erosion on the rocks and on other park features (smaller pebbles and rocks). They may see signs of wear on stairs, carvings, and curbstones, as well as crumbling at the edges of the park's boulders.

Have children discuss the effects of human and animal activity in wearing away rock and concrete. Help them to realize that trees and other plants can crack concrete as they push to find room for growth. Discuss the role of weather in wearing down rocks – freezing and thawing in winter can cause cracking and breaking of rocks and concrete.

Have children collect rock samples from different places. They should be labeled with the place they were found.

Some children may wish to do research on types of rock and how they were formed.

Soil

Have children look for crumbling rocks to see how they become part of the soil. Take samples near outcroppings back to the classroom. Examine gullies and clefts for different sizes and kinds of rock.

Have children do research to learn that soil is composed of mineral matter (decomposed rocks, sand) and vegetable matter (decomposed leaves and plant – humus). They can discover a soil vocabulary: sand, silt, clay, humus, loam.

Experiments with soil.

Rub rock bits together to make particles of rock "dust."

Sieve soil to find some of its components: rock bits, twigs, decomposing leaves.

Weigh the same volume of sand, clay, gravel, humus, and loam to find out which is more dense.

Test the absorption rates of different soil samples. Into containers (with drainage holes) place equal quantities of each soil type; label the containers. Pour the same quantity of water into each container and observe when water begins to run out of the drainage holes. Observe the rates at which each soil type dries out.

Chapter 5

Parkstory

The next three chapters – Parkstory, Design, and Parks for People – are closely related. Here the concept of park and its possibilities becomes more defined. Reach for the sense that communities desire parks, that they plan and pay for parks. Help children to understand that there have been different conceptions of recreation and beauty over time. Even today, different groups of people have different ideas of what is lovely and of how the park should be used.

Main Ideas

People have had different conceptions of fun and recreation in different times.

The idea of "park" has changed over time. In earlier times they were for the aristocracy to hunt, or formal gardens for promenades.

As industrial cities grew in the nineteenth century, a new value emerged: the beauty of nature and the need to preserve it.

A new movement came about, that of humanitarian reform. One of its first manifestations was the idea that all people, including poor immigrant workers, should share in the benefits offered by parks.

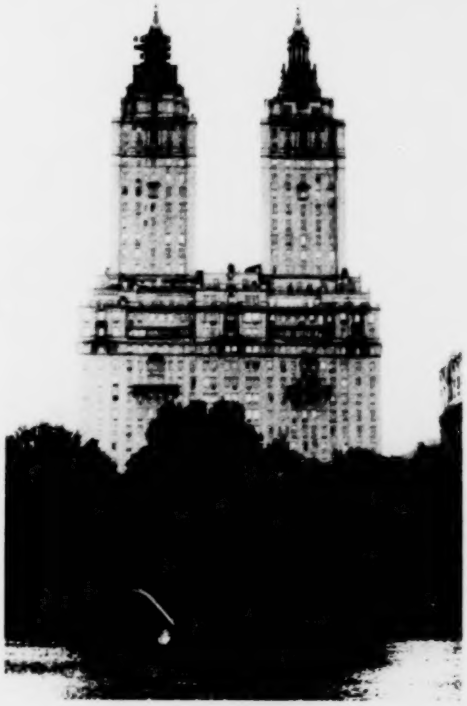
Central Park was planned as a showplace and as a refuge for the people of the city of New York. It combines two styles of park design: naturalistic, which attempts to look like untouched country; and picturesque, which dramatizes natural wildness and fanciful structures, like the Belvedere Castle and rustic shelters.

A unique feature of Central Park's design was the grade separation of traffic, including separate paths for walkers and horseback riders, and four sunken transverse roads for carriages. This has since become a standard feature of traffic management and highway design.

Parks today are public showpieces that celebrate a sense of community and the world of nature.

People have had different ideas of how to use the park and how to make it beautiful (see Design and Parks for People).

Right now there are disagreements about what kinds of public events to allow in the park. (Rock concerts in the park, food vendors.)



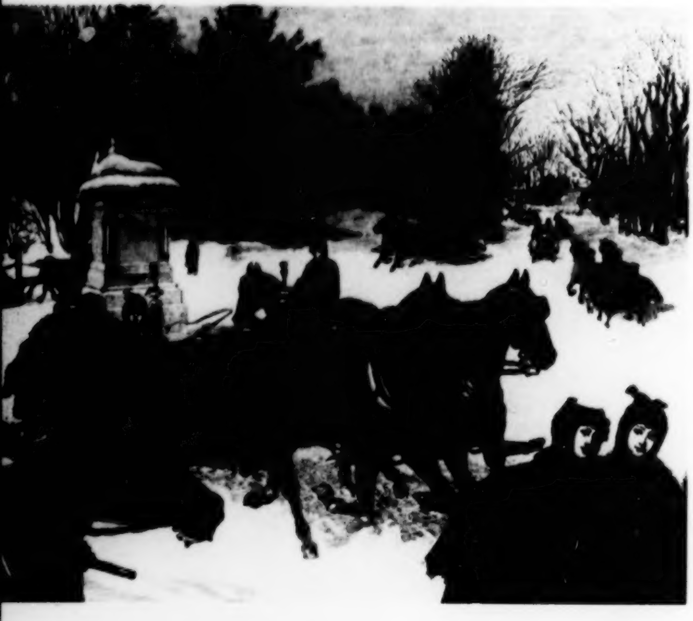


Photo Essay

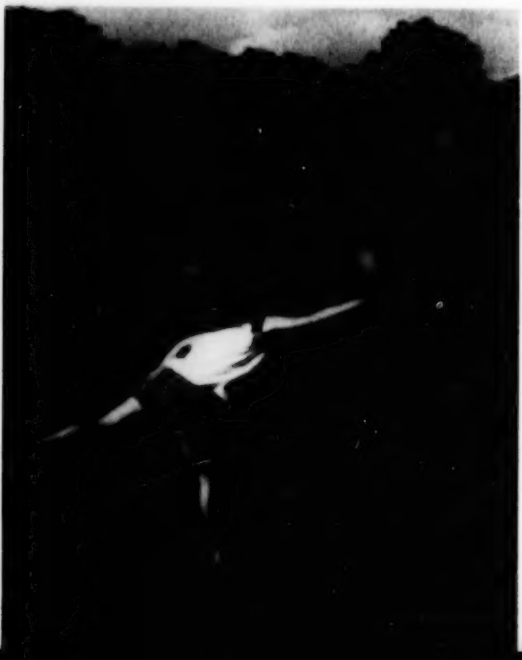
Use a picture history to help children learn the story of the park. The questions that follow are models. You may find many more pictures and questions to pursue.

Why do you think New York needed a park?

What did people have to do to make the park?

Who planned the park?

Tell some ways that people used the park long ago and ways people play in the park today.



Parkstory Essay:

Central Park was a great project for New York City. It was intended to be a showplace for a city that in the 1850s and 1860s was just beginning to feel its international character and importance.

In the 1800s, as cities grew and took over large areas of natural landscape, people's awareness changed. There was a new consciousness and value for the natural world. Painters and poets celebrated nature, and people traveled just to see beautiful views. People felt a need for parks to keep natural scenery alive in cities.

Powerful public figures like William Bryant and Andrew Downing (see Biographies, page 70) called for the creation of a park in New York that would rival the great parks of Europe. New York's park would be a celebration of nature and a pleasure ground for the growing number of wealthy New Yorkers who drove about in carriages, rode horseback, or promenaded for exercise and enjoyment.

The park was also a democratic experiment. It was planned to provide fresh air, space, and the relief of natural scenery to the huge numbers of immigrant workers who lived in crowded, miserable conditions in the city.

Though twenty-odd years later laws were made to improve the working and housing conditions for workers, the opening of parks to the people was an early social response to the squalid conditions and human needs of workers and their families.

The creation of the park become a political issue. Many park advocates wanted to build it on the East River between 66th and 77th streets. Lawmakers decided that the area was too small, and that it was needed as commercial waterfront. A larger area was chosen, and the city bought 624 acres of neglected land bordering on the Central Reservoir, which was part of New York City's water supply system. Eventually the area was expanded northward to a total of 843 acres.

The land that was to become one of the world's great parks was not promising. There were several swamps, squatters' huts, an arsenal, and abandoned barracks and forts. The land had been an unofficial town dump for years. However, there were also attractive features: dramatic outcrops of rock, and many different kinds of trees and shrubs.

The bill to create the park and set aside money to build it was passed in Albany in 1853. A design competition was held to find a plan for the park. Meanwhile, the Park Board hired Frederick Law Olmsted to supervise the land-clearing, which began in 1857.

Calvert Vaux, a popular young architect, persuaded Olmsted to enter the contest with him. Because Olmsted was busy supervising the draining and clearing of the park, they had to work at night. They walked all over the area, noting where the outcrops of rock were and planning where they might create meadows, lakes, and carriage drives. Vaux and Olmsted called their plan the Greensward Plan. Their idea was to create what looked like completely natural scenery, except for a few formal spaces like the Mall and Bethesda Fountain. But to keep this "natural" scenery and provide for all the users required a complex plan.

One of the most ingenious features of the plan was the introduction of grade separation of traffic. The planners made separate plans for pedestrian walks, bridle paths, and carriage roads. Walks went over bridle paths on ornamental bridges, or under carriage roads through decorated archways. Four roads across the park were sunk so that they are practically invisible. This was the creation of the first traffic underpass in the United States.

The Greensward Plan called for hills and lakes to be created by blasting and moving earth. It was a project that made more than 1,000 jobs for immigrant workers. They drained swamps, built up hills, hauled tons of topsoil. They built bridges, roads, and underpasses.

Two nurseries were set up to cultivate seedlings for planting in the park. The initial phase included 5 million plantings of 590 species of trees and shrubs and 815 kinds of perennials and alpine plants. It took fifteen years to complete the plantings, and another forty years for the trees and plants to mature and for the park to take on the contours it has today.

The main purpose of the plan was to create pleasing scenery for walks and rides. Since then many elements, including statuary and playing fields, have been added. But one sport was provided for – ice skating. Always a popular sport on New York's old canals, the park's ponds and lakes provided a new place shallow and safe enough for ice skating.

Compare and Contrast

With your class, look at photos of New York 100 years ago. (Sources are suggested in the Bibliography on page 70).

Discuss similarities and differences. People probably enjoyed the green and natural scenery of the park then, as they do now. They liked walking and picnics and horseback riding. Now we use the park for more active sports.

Ask children to describe the clothing they see in the pictures and tell how today's dress is different. (They may note that there is an especially marked change in girls' clothing, which makes an active life easier today.)

Chapter 6

Design

Park design involves choice and plan, need/function, and people's ideas of beauty and recreation. Design experiences and ideas need to be worked in along with other trips. This material is too abstract to stand alone. Relate this to the central idea of the definition of a park. Collect ideas of what a park needs, what makes it useful and beautiful. A major idea is that there are different styles; different choices in how a park can look, how it can be organized.

Main Ideas

Need/function: This brings us back to the questions: Why a park? What is a park for? What is needed and wanted in a park? People need and want a connection with nature. They need space and fresh air for exercise and pleasure. There are specific needs for sports and other facilities.

Geography: The natural features of the land help determine what the park will be like. (Rock outcrops in Central Park helped to form the design.) Also ask: How did the look of the city itself influence the park's designers? (Because the city is laid out in straight lines, Vaux and Olmsted chose to use gentle curves and rounded slopes in their park.)

Diversity: There are different ideas of beauty and style; different choices that can be made in the design of a lamppost, a shelter, a statue, the shape and terrain of a park.

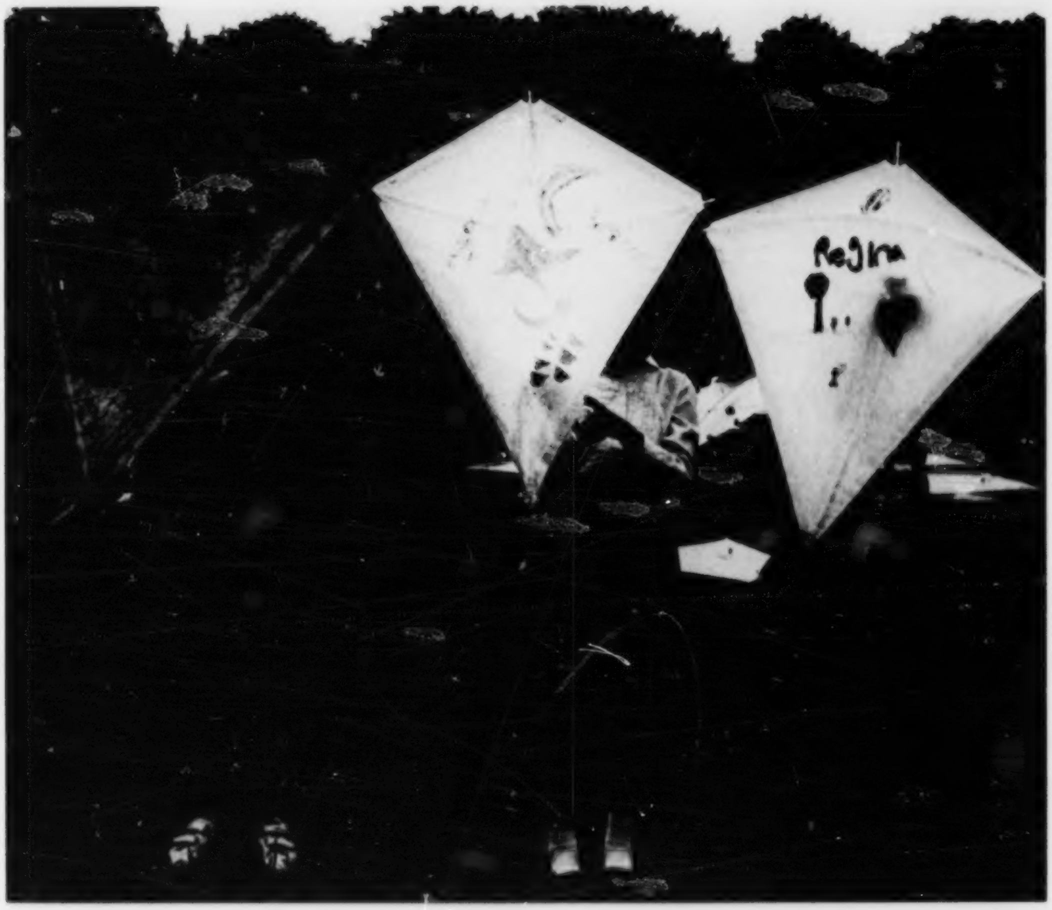
Central Park was designed as a naturalistic park. The designers worked hard to make a complex plan look completely natural.

History: Favorite recreations change over time. Ideas of beauty change over time. (Examine the park for clues to the past. Statues, lampposts of different designs, dates on gates of different styles are all clues.)

Plan: Every project needs a plan. The park's planners considered many things in making their plan.

Project

One possible culminating activity for this study is a model of Central Park, or a model of an ideal park. Keep in mind as you do the study the questions that will help in planning the model: What will you put in your park? What does it need? Why?



Making Plans

Preliminary experience: have children play with Cuisenaire rods. Discuss what is interesting or attractive about the structures they create. Compare these to what happens when the rods are dropped randomly. Note that unplanned work is chaotic and confused, that designs help to make the work interesting and attractive.

Have students do a mural or large collage on a chosen theme. Call attention to the decisions they have to make in order for it to be a pleasing and successful project.

When the class begins to work on the model, again call attention to the need for a plan. Discussions will involve: What will we put in the model? Where will we place it? How will we do it?

Using Space

On one of your park walks, take the children to two distinctly different settings (for example, an asphalt-surfaced area with benches and paths; an open field with rocks and hills; a wilder, more natural area). Have a task planned, such as counting things, or nature observation, but also give free time in each of your chosen places. Make notes of how children behave in each space.

Later, in a classroom discussion, ask: Remember the ___________ ? What did you do there? What did you like? What are some words that tell about that place? How did it feel? Ask what this tells about park space. Share with the children the different behavior you observed. Ask them: Why do you think you did that? How was it different?

Park as a Living Space

Ask children to look around the classroom and see what the major structural parts of it are. List these on the chalkboard. List also the items that are part of maintenance systems, such as radiators and water pipes. Ask: Why did they put the windows there? Why is the door in this wall? How was that decided?

Discuss that buildings have to be planned. Explain that parks also have to be planned, and that they have some of the same features.

Do an observation walk. Prepare a trip sheet or just talk with children as you go. Have them look at the park as a living space. Can they see doors? Windows? Spaces like rooms? What are they? What is the park furniture? How is the park decorated?

Collect words that describe the park and feelings about it. Ask: What is in the park that you like? Keep a word list as a resource for writing and spelling: green, leafy, wide, hilly, smooth grass, wild bushes. Add to the list as children find more words for their park.

Given the word list, and children's observations, ask: People planned this park. What do you think they wanted to do? What kind of park were they trying to create? Tell them that they can find out about this in two ways–by looking at what is in the park, and by reading what the park's designers actually said about planning the park.

Other questions: What are the parts of the park? Where did they put the shelters? Why? How does the designer make the water accessible?

Use photographs of different kinds of parks for a discussion: wilderness parks, public gardens, sports parks. Have children describe each setting and tell what it is probably used for. Make a chart of different types of parks and the features they have.

Then ask the children to check Central Park against their chart. What features does it have? What kind of park would you say it is?

Help students develop an idea of the geography of your area. Have them describe:

Terrain	**Vegetation**	**Climate**
hilly	woodsy	warm, dry
rocky	grassy	cold winters
plains	concrete,	hot summers
		rainy

Discussion: How does this affect the way homes and public buildings are designed? The way streets are laid out? How people spend their time? How is your park suited to (and affected by) the geography? (Plants, drainage, terrain, activities.) Give examples.

Natural and Man-Made

Distinguish between natural and man-made features. Take an observation walk; take along trip boards and writing materials. Ask students to make two lists, one of natural features of the park, and one that lists man-made features such as walls, gates, paths, statues, lamps.

Make sure that students observe the sunken roadways and bridle paths. Call attention to the different surfaces of paths and roadways. Ask why children think there are different surfaces. (Bridle paths have soft surfaces to spare the horses' hooves. Roads need to be paved. Walks can be asphalt or brick or stone; the water can soak down between the cracks.

Research Essay

Prepare a short text from which your students can get information to answer prepared questions. Here is some background information.

The land on which Central Park was built had been part swamps, a public dump, squalid squatters' huts. There was an arsenal and other abandoned war installations from the War of 1812. It was an unattractive and difficult terrain. Its advantages were bold outcrops of Manhattan schist, and a variety of trees and shrubs growing naturally (forty-two kinds).

The park designers and builders had to drain the swamps and fill in with new soil to create a "piece of country" in the city. To make it more beautiful and dramatic, they moved tons of earth to make hills, dug out lakes, and graded roads and paths.

Even though the park was to look like a natural landscape, the roads and paths had to be planned to go from the entrances, or gates, to the different recreation areas of the park. The designers did some interesting new things. They made all the paths and roads curved, to contrast with the straight lines and square corners of the city.

The most unusual thing they did was to create four sunken roadways, so that traffic across the park was hidden. It helped to keep the feeling of "country in the city."

To build the park, more than a thousand workers labored for more than 15 years. They moved 10,000,000 cartloads of rock and earth, and planted 5 million trees and shrubs.

Olmsted's plan showed where the main sections of the park, such as the Ramble and Bethesda Fountain, should be, and where the walks and roads would go. Deciding where to plant trees and shrubs had to be done out in the park. A man named Ignaz Pilat supervised much of the planting of the park. He worked for years to make it beautiful. Olmsted worked with Pilat in deciding where trees would be planted, and an open view should be.

Central Park was built to look like a totally natural environment. To provide a relief from the straight lines of streets and blocks of city buildings, it was given gentle hills and curving paths. The highways that cross it were sunken so that traffic would not intrude. Rock outcrops contrast the ridged gray rock with soft green grass. Plantings of trees screen the buildings, forming clusters of lush green that open like windows to give a view of a lake or a sweeping meadow. Banks of daffodils are planted so that they bloom like wildflowers. Blossoming trees make large pink and white areas in spring. Following a path around a lake or up a hill, you come to a surprise at every turn.

Questions:

What was the land like before Central Park was built?

What was in Olmsted's plan?

What did Ignaz Pilat do?

What is special about the park roadways?

Discussion

Why are the park roads and paths curved?

Describe the city – collect words and images. Discuss how the park is different. What kinds of views does the park present? Note that while the city feels rather flat, despite some inclines the park has a feeling of gently rolling terrain.

Woods/Meadow

Plan a walk that includes exploration of a meadow and a woodsy area. (See Nature Study for a related activity.) Have children describe each area on their trip boards, or collect descriptive words in the field. Brainstorm. Have them sit in a circle in the meadow and tell what they see and hear – grass, sunlight, lots of sky, people running and playing; long view, paths stretching into the distance, trees in the background. Do the same in the woodsy area. Have students choose one of the two areas and write a few sentences telling what they saw, what they especially liked, and why.

Natural Parks

To contrast a naturalistic park area with a formal area, plan a walk that takes in the Ramble, the 72nd Street lake, and Bethesda Fountain and the Mall.

For this walk, prepare trip sheets and a clipboard. For the Ramble, ask children to list, circle, or check off things they see: paths, trees, rustic shelters, water, birds, animals. Have them write or circle descriptive words: woodsy, wild, curved, straight, orderly, shadowy, bright. Ask them to write: What do you like about this area? What is special about it?

Continue to Bethesda Fountain and the Mall. Again, have children list or circle, on a separate sheet of paper, what they see here: stairs, decorative balusters, statues, rows of trees, a long paved walk. Have them circle descriptive words on a list: woodsy, wild, straight, orderly, decorations. Questions:

How is the water's edge different from the lake?

How are the trees different?

Describe the walkways in each part of the park.

Discussion: Go over the descriptive words children selected for each area. Show a sketch map that includes the Ramble, the Fountain, and the Mall. Have children label the maps. Talk about how the areas look different on the maps. (The Ramble has twisting paths; the Mall is straight, with trees planted in rows.)

Discuss the fact that both these areas were designed. Ask: What do you think the Ramble was made to be? Why do you think they made the fountain and the Mall that way? Ask children which area they like better and why.

Design Observations

Combine several of these subjects. Prepare questions to direct observation, and make a trip. Children will have lots of questions and ideas.

Paths: Why are they curved? Where do they go? What are they for? Are there different surfaces? Why?

Entrances: Have children look at a park map and note the names of some of the gates. On your walks, visit different entrances and see how each is designed to express a particular idea or honor a group. They may want to name and design the entrances to their model park.

Roads: Have children observe the park map. Note that most of the roads are curving. Discuss why. In your park travels, be sure to bring children to the underpasses. They should see the sunken roadways and how bridle paths or pedestrian paths go under roads. Point out that the roads connect different features of the park. Prepare task cards to trace routes from one part of the park to another.

Gardens: Visit the Shakespeare Garden or the Conservatory Garden. Have the children make sketches or write poems. Talk about why each garden may have been located where it is. Describe the garden. Note sunlight, terrain, the kinds of plants, and "look" of the garden.

Trees: Compare the spacing of trees in the Ramble and along the Mall. Children can do a tree census or map a small area. Can you tell that the trees were planted? How? In Central Park, some areas were planted to look natural and others to create a formal design.

Water: The lakes in Central Park are man-made. What do they add to the park? What do you like about the lakes? How do you get down to the water? Are there paved edges, bridges, grassy banks?

Bridges: Visit bridges. Have children make sketches. Look at drawings or photographs of different bridges. Post some of these to show different bridge designs in the park.

Man-Made Objects: Have children collect examples of park furniture (sketches, photos) for comparison: rustic shelters and benches, metal-frame benches, different styles of lamps, fountains, decorative stonework.

Project: Have children make designs for something they would put in a park – a bench, fountain, or decoration – and post their designs. Save for possible use in a model park.

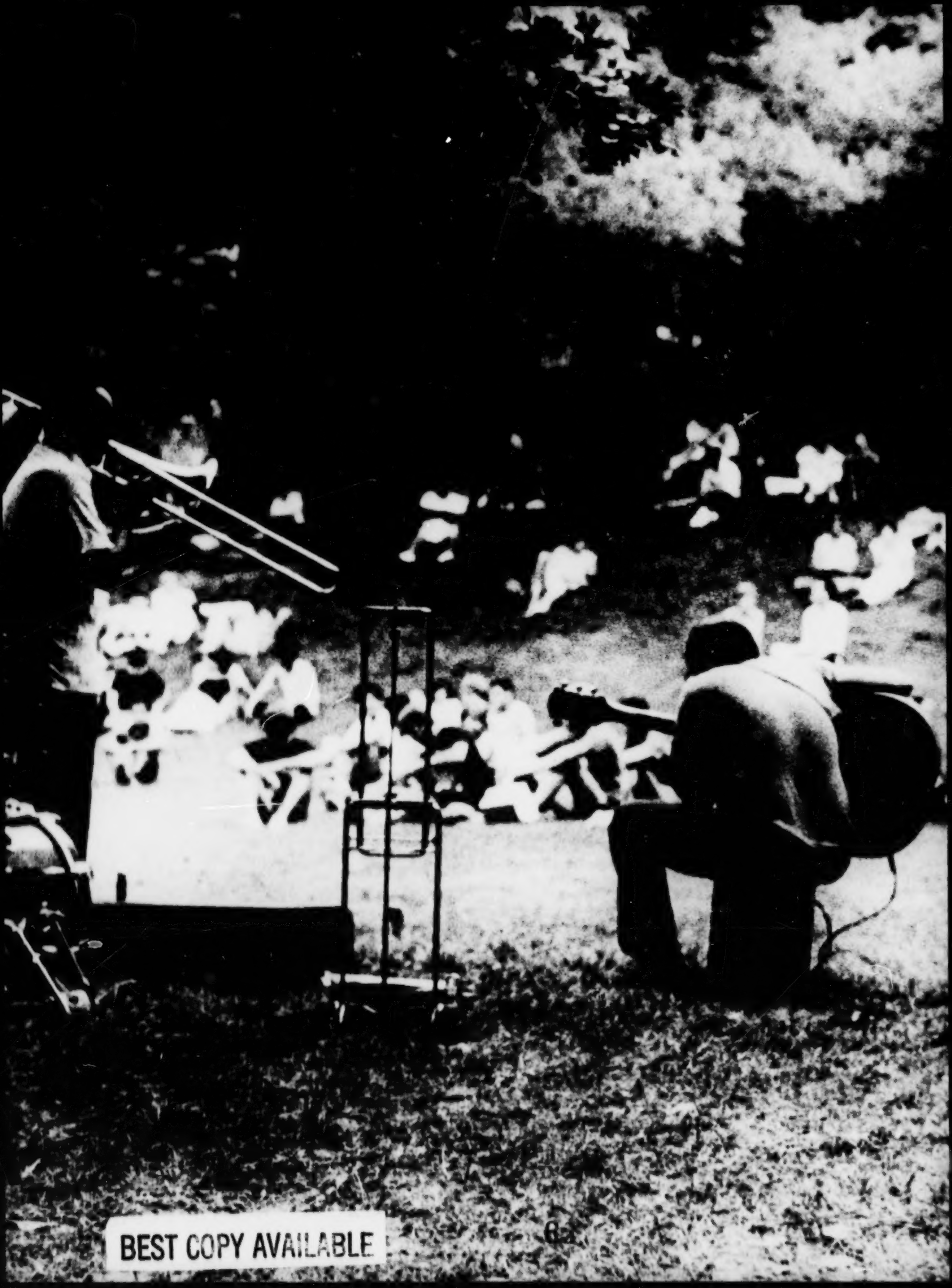
Photo Essay

In early years, statues remembering war heroes and great artists and writers were erected.

Later, people preferred a different kind of art – statues of animals and story figures.

Take a "statues walk" or use photographs to compare commemorative statues of literary figures and military heroes like *Balto* and *Alice in Wonderland*. Talk about the different kinds of statues. Make a list. Make sketches. Write down an inscription from a statue. What does it say? Which statues do you like best? Why?

PILGRIM FATHERS



Chapter 7

Parks for People

You have developed an idea of what a park is, what people do there. Children have done nature studies, perhaps adopted a part of the park or individual trees. They know something about the jobs people do to keep the park clean and healthy. They are acquainted with the park's history. They have learned to use maps on trips, and perhaps to make maps to record what they see.

Main Ideas

Central Park was built to provide the beauty of nature within the city. (Review) People have had different ideas of what is beautiful and what should be in a park (different kinds of statues; natural or formal settings). Many different groups and individuals use Central Park in different ways. The wonder of Central Park is its diversity.

People have different ideas about how parks should be used. There are controversies today about whether rock concerts and food vendors should be allowed in Central Park.

Why Parks?

Ask children to imagine and give their own ideas about why parks are created.

Children should note that one purpose of parks is to keep a piece of the natural environment alive in an urban area. They will also think of the recreational activities parks provide. Help them to appreciate the beauty of open meadows, trees, banks of flowers in park gardens.

People need contact with nature. They need the contrast of living green when they live in a heavy populated, concrete-and-glass city. They need the wildness of woods when they live in a manicured suburb.

Worksheet: Who Uses the Park?

Plan one or more visits to the park, perhaps at different times of day. Prepare trip sheets.

Share children's findings. Note the numbers of people, the variety of activities. Some activities are group activities, others are solitary. Make a group chart or story about this first observation of park use.

Make a second trip at a different time or to a different area. The point is to create contrast, to see differences and think about the variables. Children can then make some inferences about why certain groups or individuals use the park at particular times. For example, many business people walk or eat in the park at lunchtime. In the mornings, the children are more likely to see school groups and older people.

Writing

Help the class develop a list of the different categories of park users. Have children write brief paragraphs about what they have observed or help them develop a group story like this: "There are lots of joggers in the park. They wear special shoes and clothes. Many joggers run around the reservoir. Some runners like to measure how far and how fast they can run."

Interviews

With the class develop a list of interview questions they would like to ask park users.

Accompany small teams of students and help them to carry out interviews. Children may write a group essay to summarize their findings. Have them interview some older park users to find out how recreation and park use have changed over time.

Do you live near Central Park?

How long have you been coming to the park?

What were some park activities years ago?

What did people wear?
Did they play different games?

What did you like to do in the park?

What do you enjoy in the park now?

How has the park changed? What do you like better? What do you wish was different?

Discussion: Encourage children to compare park activities of long ago with those they enjoy today. Help them to realize that as they grow older, people's interests and abilities change. Ask children what they think they will enjoy in the park when they grow up.

Park Use

Sometimes there is disagreement about how to use a park. People with different interests and values want the same space. What is the best outcome? Help children to develop an answer, for example: "The best thing is for people to care for their parks, and to continue the debate. Parks can keep changing and growing to meet people's needs." Children may interview selected people about park use, such as parks personnel and community members. Develop questions about how the park should be used, and what kinds of things endanger the park.

There are different ideas on how the park should be used. Here is a list. Comment on your feelings about each activity.

People celebrate in the park.

People play in the park.

People rest in the park.

Park used for great gatherings and celebrations.

Essay: Controversy–Trees

In the fall of 1981, members of the Central Park staff began clearing and replanting a part of the Ramble. They cut down some trees to improve the view. Park users who wanted the Ramble to remain unchanged wrote letters and signed petitions to prevent changes. They did not want trees cut. There was a fight between the people who wanted to clear and "improve" the Ramble, and the people who believed that it should stay just as it was.

The debate was so heated that it went before the Landmarks Preservation Committee for a decision. It was decided that from then on, the Parks Department must submit its plans to the Borough Parks Board and to the Landmarks Commission. The public cares very much what happens in Central Park, and in this way people will be informed and can respond to the Parks Department's plans.

Questionnaire

Which of the following do you think are appropriate in Central Park?

Golf
Biking
Hockey
Tennis
Frisbee
Car racing
Roller Skating
Selling Food
Rock Concerts
Softball
Football
Sailboats
Picnics
Helicopter landing field

Ask students to name some other public events that have taken place in the park (peace march, New York City Marathon). Do you think the park should be used for big public events? Why? Why not? You may want to provide a chart with some arguments and some blank spaces. Let the children debate the values and develop additional ideas. Are some events more suitable than others?

Discuss other questions of park use: Should food vendors be allowed? Should there be restaurants? What would happen if people could build anything in the park?

Central Park is a park where
people go to jog and to play and
to eat and to just sit. Central
Park is a veary nice place with
green grass and big trees

Thomas.

Teacher summary

This section sums up some general principles of the park study and suggests activities that can be used in any part of your study. Using a variety of learning modes helps all children to master content and "make it their own."

Use the *Central Park Study Book* to develop the following:

Skills

Observing
Recording (sketches, maps, words, counting charts)
Mapping and orienting
Reading for information
Speaking, listening, discussing
Writing
Interviewing

Thinking

Observing and recording
Sorting and classifying
Comparing and contrasting
Understanding sequences
Inferring from data
Generalizing from experience
Testing hypotheses

Attitudes and Values

Appreciation of the beauty of nature
Awareness and appreciation of animal adaptation and of natural processes
Value of the preservation of the natural world
Value of community cooperation
Recognition of different needs, interests, and points of view

Trips

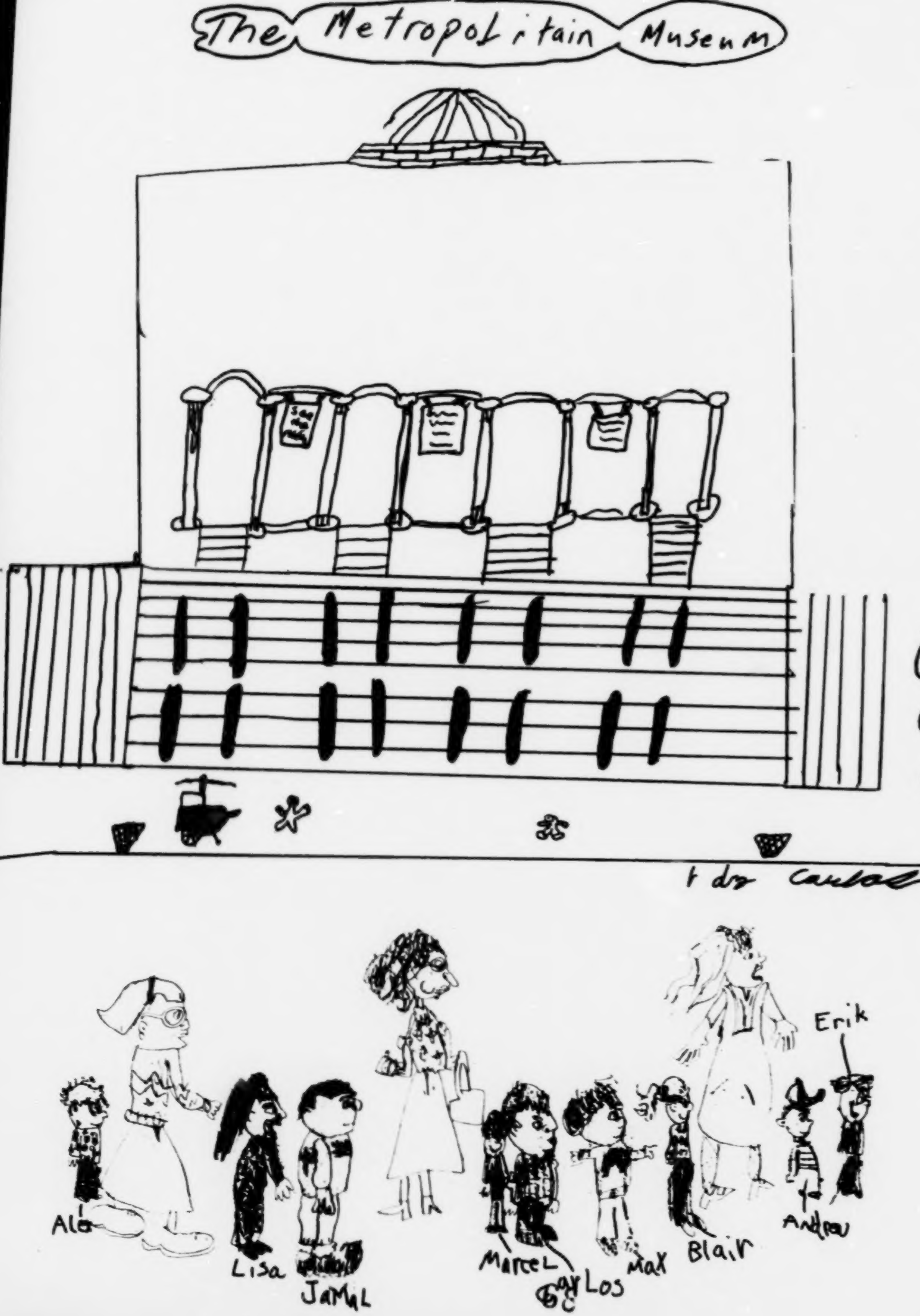
Trips are a very important form of research. Structure group trips so the children come back to the classroom with a sense of having accomplished something. Give them a focus: have them collect things, gather data, make sketches, or do some writing. Fasten one or more sheets of paper to a shirt cardboard or other backing to make a trip sheet.

In the classroom, share students' findings. Help children make a group trip story, a list of observations, or questions for research. In these ways you make it clear that the children have gathered valuable information, that they are engaged in research.

Be alert to the questions and experiences that excite children. Keep questions on individual cards in a "question box" or on a large hand-printed list on the wall. Be prepared to develop these even if it means a change in your plans. Valuing children's questions is a crucial way of reinforcing the learning process.

Our class Trip

On friday November 13 our class went to the Met. The museum is at 81st. St. and 5th Ave. Laurie, Mrs. Wurtzel, and Amy met us at the Museum. Our class saw a model of central Park the way it looked one hundred years ago. Many of the places that olmsted built long time ago are still in central Park today. It was a great trip! we all learned a lot from it. We walked from 95th st. to 81st st. along 5th Ave.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Andrew
Erik

Everyday skills practice

Words

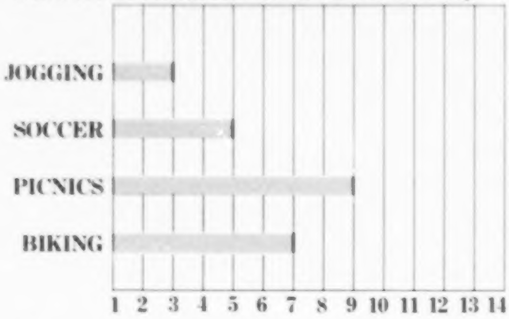
Print new words on large cards, and post them. Use the words, with pictures, to make matching games and classifying games.

Keep a "word box." Children can fish out a word, make a sentence, do a drawing, dramatize the word, make a story.

Charts and Graphs

Help children make charts and graphs to show what they have learned. Make activity cards that require children to interpret a chart or graph. Here is a sample graph to show format and kinds of information that can be included.

Graph: Favorite Park Activities
Number of children who do each activity



Games

Use the park study to make games. Examples: Workers/Tools/Jobs and Leaf/Fruit/Tree Name. Children can match picture and/or word cards.

Classifying games include Is It Natural?/Made by People? and Is Is Old?/Is It New?

You can also develop games or activity cards to relate to park maps and information charts. For example: Find the fish pond. Go east a short way. What landmark is there?

A sequence game is What Comes First? Show a series of sketches of a process, such as growth of a seedling, and have children put them in order. Have children create sequence games.

Research

Research means finding out. Research involves essential skills, but there is more than one way to do it. Taking a walk and observing seasonal changes is doing research. Interviewing people is research. Reading for information is research. The key is that research is a directed inquiry, a finding out. When a researcher is interested in a subject, he or she observes it, develops questions about it, and then tries to answer those questions. In doing research with children, it is critical to *excite interest*, and then to *help them develop their own questions*. They need to know *what* they want to know, and then to develop the confidence that they can find out. Children's questions can be the framework for class research.

Interviews—The People Connection

Because it does not depend on reading and writing, interviewing is an important tool for learning disabled children. Use interviews to develop questioning skills, to help children gain wanted information, to get a "feel" for a subject. Your class might interview park users to find out how they feel about the park; park workers to get information about jobs and park problems.

Here are some guidelines for interviewing.

Identify suitable subject(s) and make an appointment. Tell the children that they will be conducting an interview and ask them what they want to find out. Help them to define categories of information they want.

Have children formulate specific questions for each category. They will then have to select a reasonable number of questions for the interview.

Open-ended questions: Help children to ask questions that elicit more than a "yes" or "no." Instead of, Do you like your job? children could ask, What do you like about your job?

Children may practice by interviewing each other or family members before the real event. This exercise can be used to help them become comfortable with interviewing and to develop a sense of "good" questions that gain information.

Plan the interview so that different individuals each have a question to ask. Encourage children to ask more questions as they arise.

To record the data, use a cassette tape recorder; this frees children to concentrate on listening. Later they can make notes on what was said.

Help children to synthesize the results. Write sentences on the board; then ask children to put them in order. Work to create a finished piece that is an Interview Report.

Have the class plan and send a thank-you note to the interview subject.

Discussion and questioning

To share information and help children make inferences and draw conclusions, use discussion as part of every investigation. Help children listen to each other and respond appropriately to others' remarks. An awareness of different types of questions will help you use discussions to develop your main ideas.

Ask children to identify things:
What did/do you see? What is this?

Ask them to interpret what they see:
What is happening?

Ask for inferences:
Why do you think this happens?
How do you think these things are related?
Note that you are asking for ideas and guesses. There are no "right" answers at this stage. Help children to express their ideas freely.

Test ideas by asking for evidence: How can we know/find out about this (relationship)?

At the highest level, ask children to imagine:
What would happen if. . .? What could you do?

You may need to spend a lot of time helping children articulate what they see and hear. Gradually work toward interpretations and inferences about experience. The park study is good for this because it provides so much hands-on experience.

Children's questions are a crucial part of every discussion. Write important questions on the chalkboard or on oak tag. Help children puzzle out how they can find answers. Investigating what *they* want to know gives children energy and focus for serious research. The fact that their questions are treated seriously is a boost to self-esteem.

Observing and Collecting

Observation is the beginning and most important part of any study. Help children observe. Using preliminary question or trip sheets, give them things to look for, things to count. Plan observations over time (seasonal change), or observations that will allow for comparing and contrasting (woodland, meadow). Help children find ways to record what they find: tally marks with pictured objects, sketches, writing words and simple sentences; mounting and labeling findings, such as leaves and seeds.

Writing

Use writing with the whole class and with individuals throughout your park study. This is a wonderful chance to develop verbal skills, explore imagery and feelings.

Encourage children to write. It is important that children choose their own topics and work at their own pace. Make writing a relaxed and familiar classroom process. Some suggestions for getting children started are given below. Ideally, once they feel free, they will generate their own subjects.

Later, for pieces they value and want to share, help children to edit their work for spelling and grammar. However, the emphasis is on *expression* rather than correctness.

Words

One way is to get words flowing. Help children find a focus: Clouds are like. . . Water is. . . I hear. . .Collect a multitude of words. Talk about them. Enjoy their sounds. Post these words. An eminent writer has said that his writing often begins with *lists* of related images. Use list-making to help children find words for experience, to describe something, to make similes.

Dandelion fluff is like clouds, like lace, like spider webs, like goose down, like snowflakes. There are little spikes, with "stars" on the ends.

The park is. . .

Description

Have children describe something they are looking at: a building; sunlight on water; a playing field. Ask specific questions: What colors do you see? What are the sounds? The smells? How does it feel to you? What detail do you like especially?

Ask children to note and remember smells, textures, colors, shapes. They can bring back word "souvenirs" by remembering or writing what was special about an interesting nut or twig.

Action

Take a park walk and have the children write or dictate the words for all the activities they see. Encourage them to use specific action words. People throw Frisbees – they leap, they catch, they twirl, they stumble, they jog, they climb.

Have them find all the action words: bat, slug, slide, dance, race, hang by the knees. And not just for people: kites soar, bob, glide; dogs romp, gallop, chase.

Appreciations

Encourage children to tell what they like about something.

The giant rock.
It's excellent.
It's good to climb on.

The tree with white flowers
It fits in the park
They're blowing with the wind.

Share children's writing

Sharing is an essential part of the writing process. Help children share edited, fair copies of their work.

Make multiple copies of their work and present it as a class magazine.

Stories

Have individual students, or the whole class, develop a story as an exercise in sequencing. Provide a situation to start with, such as a "mystery" among the squirrels. Help the children develop characters and a sequence of events.

Journals

If appropriate, have the children keep individual journals in which they can record various kinds of information, including observations, experiment results, and personal writing. Help them to edit their work and make fair copies of things as they wish.

Editing

Establish this as a benevolent process of "making it better." With each child, identify and work on a specific skill, such as spelling, punctuation, writing complete sentences. Set a reasonable goal, and when this is mastered, or in a stipulated period of time, go on to another aspect. Even the "fair copy" will not necessarily be perfect. What is important is that children are learning skills in context, and that they are making the process of editing their own.

Art

Use art experiences regularly to help children visualize and internalize their experiences. For many students, this form of expression is less fraught with judgment then writing or speaking. Here are some ways to use art in a park study. Remember that group activities can help develop a group identity and cooperation through group planning.

Individual projects

Have children make sketches on trips and in the classroom. Possible subjects are:

adopted trees; different leaves, seeds, fruits;
birds and animals;
architectural details, carving; old lampposts, benches, and other park furniture.

Encourage both accurate representation (as part of observations and reports) and fanciful art (UFO landing in the park; a march of the park animals). Distinguish between these two kinds of art.

Encourage regular painting, both free choice and painting from park experiences. Use 12x18-inch newsprint, poster paints in primary colors and large brushes. Have a short discussion time before painting during which the children can talk about a recent trip. When needed, give a specific assignment: Paint the part you liked best: Choose one: lake, statue, Belvedere. Paint a stormy day in the park.

Have children do rubbings of leaves, bark, carved stonework, and other textured items in the park. Use the side of a fat crayon (or charcoal). Press newsprint-quality paper firmly against the object in question. If necessary, tape it in place so the image won't slip. Rub the crayon firmly over the paper until the complete rubbing appears.

Group projects

Collages: *After a special trip or study, choose, or have the group choose, a theme. Have each child make a painting or drawing of some plant, object, or person that relates to the theme and to his or her experience.*
Post a very large strip of brown paper (3 or 4 feet x 3 feet wide) against one wall. Share indi-

vidual contributions and help children plan a broad scheme for the collage. Some may wish to cut out their figures. Then they can fasten all their pictures to the collage with tape or glue. The group may want to create a short paragraph or caption for their work.

Mapping

As suggested in the text, provide extensive experience with simple teacher-made maps and aerial views before asking children to draw picture maps. Use simple route maps for all trips. Talk about directions on maps. Make maps for walks around the block, and have children fill in pictures or symbols for street furniture and other features. Post a large outline map of the park or of an adopted area. Children can do many things with these maps: draw in features as they learn about them; color areas they have visited; write captions about their experiences in special places. Make activity cards or games to go with teacher-made maps.

Children can then do exercises in making maps. They can map the placement of fixtures around a sink; doll furniture on a table-top; an arrangement of tools or utensils. Have *them* mark the route on a map of a familiar trip.

Grids

Help children use grids to locate things. Impose a grid on a park map or trip map as follows:

Ask the children to tell in what square the building is found; where the trees are.

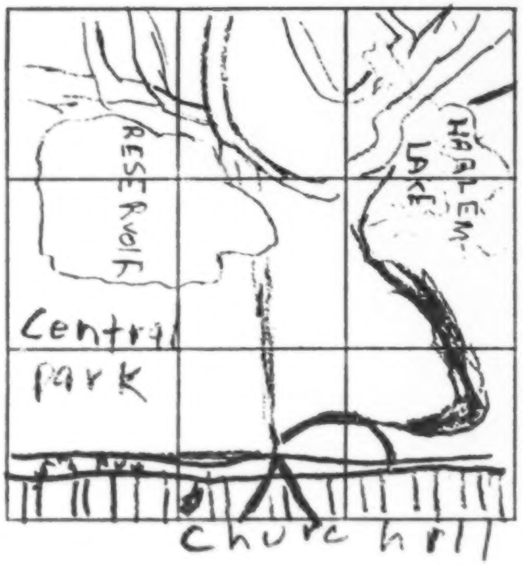
As skills develop, children can find items on commercial maps in the same way.

Enlarging maps

It is easy to enlarge a map by using a grid. Take a small map that you wish to enlarge. Impose a grid of ½-inch or 1-inch squares on it. Label the grid.

Then take a much larger piece of paper. Draw a grid of 2-inch or 3-inch squares and label it in the same way. Now draw the small map, square by square, on the larger paper.

Have children work with coordinate grids. Teach them to label and locate points on a grid.



Then have them play a game like Battleships. Have students work in pairs. One student makes a simple design on his/her grid. Then that student calls out the names of the points used in the design to his/her partner. The partner tries to draw the design from the information. Pairs that successfully reproduce a design are the winners.

Another way to use a grid in mapping is out of doors. You will need 48 feet of mason's line, or some other strong string, large nails, tongue depressors, or garden stakes.

Choose an accessible area about 12x12 feet. Have students measure out the space, and place heavy long nails or tongue depressors every 3 feet, as shown. They should then use the twine to connect the stakes.

Have students reproduce the grid on a large piece of brown butcher paper (two pieces taped together) with 12-inch squares.

Assign groups of students to each square of the territory to be explored. They should look for natural phenomena, plants, rocks, and so on, and make a careful drawing of their plot. Then they can make drawings, symbols, and legends on the paper map.

(See Nature Study, page *34, for further comments on a Microground Study.)*

Biographies

Central Park

Bryant
William Cullen Bryant was a prominent nature poet and newspaper editor who began a campaign for a public park for New York City.

Irving
Washington Irving, a noted New York writer, announced the park design competition.

Olmsted
Frederick Law Olmsted was a thirty-six-year-old journalist whose publishing firm had just gone bankrupt. He was hired to be superintendent of the land-clearing that had to be done before Central Park could be built.

He worked with Calvert Vaux to create the Greensward Plan, and when their plan won the competition, Olmsted was promoted to chief architect for the park. His revolutionary ideas in park design started a trend that has influenced many parks in this country. He planned a number of other beautiful and famous parks in the United States, including Riverside Park in Manhattan and Prospect Park in Brooklyn. Olmsted designed Detroit's beautiful Belle Isle Park, and the park systems of Boston and Kansas City. Other projects were Montreal's Mount Royal, and the National Capitol Grounds in Washington, D.C.

Pilat
Ignaz Anton Pilat was an Austrian gardener who actually carried out the Greensward Plan. The plan set out the main features of the park, such as the roads, pools, and buildings. But what really gave Central Park its unique appearance was the planting. Pilat worked until his death in 1870, creating woods and vistas that give the park its beauty.

Vaux
Calvert Vaux was a popular and successful young architect. He recognized Olmsted's artistic talent and persuaded him to be his partner in making a design for the Central Park competition.

Bibliography

Barlow, Elizabeth. *The Central Park Book.* New York: The Central Park Task Force, 1977.

The Forests and Wetlands of New York City. Boston: Little, Brown & Co., 1969, 1971.

Cimarosa, Patricia S. *Volunteers In Parks Book.* New York: The Parks Council.

Graff, M.M. *Tree Trails in Central Park.* New York: The Greensward Foundation, 1970.

Reed, Henry Hope, and Duckworth, Sophia. *Central Park: A History and a Guide.* New York: Clarkson N. Potter, 1972.

Schuberth, Christopher, J. *The Geology of New York City and Environs.* Garden City, NY: The Natural History Press, 1968.

Sutton, S.B., ed. *Civilizing American Cities: A Selection of Frederick Law Olmsted's Writings on City Landscapes.* Cambridge, MA: MIT Press, 1979.

Ecology and Conservation

Bendick, Jeanne. *Ecology.* New York: Franklin Watts, 1975.

Billington, Elizabeth. *Understanding Ecology.* New York: Frederick Warne, 1971.

Boy Scouts of America. *Conservation Skill Book.* BSA, 1979. There exist also a teacher's guide and a troop leader's kit.

Cornell, Joseph B. *Sharing Nature with Children.* Nevada City, CA: Ananda Publications, 1979.

Gates, Richard. *Conservation.* Chicago: Children's Press, 1982.

Givens, Janet E. *Something Wonderful Happened.* New York: Atheneum, 1982.

Graham, Ada, and Graham, Frank. *Careers in Conservation.* Sierra Club/Scribner's Sons, 1980. (Includes an article on Elizabeth Barlow, "Looking After Central Park.")

List, Albert, Jr., and List, Ilka. *A Walk in the Forest: The Woodlands of North America.* New York: Harper and Row, 1977.

Lubell, Winifred, and Lubell, Cecil. *Exploring a Brook: Life in the Running Water.* Hillside, New Jersey: Enslow, 1975.

Miles, Betty. *Save the Earth! An Ecology Handbook for Kids.* New York: Knopf, 1974.

Mitchell, John, ed., and the Massachusetts Audubon Society. *The Curious Naturalist.* Englewood Cliffs, N.J.: Prentice-Hall, 1978.

Pringle, Laurence. *City and Suburb: Exploring an Ecosystem.* New York: Macmillan, 1975.

Pursell, Margaret S. *A Look at the Environment.* Minneapolis, MN: Lerner Publications,1976.

Cimon, Seymour. *Science Projects in Ecology.* New York: Holiday, 1972.

Smith, Frances. *The First Book of Conservation.* New York: Franklin Watts, 1972.

Squire, C.B. *Heroes of Conservation.* New York, Fleet, 1973..

Wosmek, Frances. *The ABC of Ecology.* Los Altos Hills, CA: Davenport, May, 1982.

Animals

Batherman, Muriel. *Animals Live Here.* New York: Greenwillow, 1979.

Battaglia, Aurelius. *Animal Homemakers.* New York: Platt & Munk, 1978.

Branley, Franklyn M. *Big Tracks, Little Tracks.* New York: Scholastic Press, 1975.

Case, Marshal, T. *Look What I Found! The Young Conservationist's Guide to the Care and Feeding of Small Wildlife.* Old Greenwich, CN: Devin, 1983.

Hopf, Alice L. *Whose House Is It?* New York: Dodd, 1980.

Leon, Dorothy. *The Secret World of Underground Creatures.* New York: Julian Messner, 1982.

Milne, Lorus, and Milne, Margery. *Gadabouts and Stick-at-Homes.* Sierra Club Books Charles Scribner's Sons, 1980.

Podendor, Illa. *Animal Homes.* Chicago: Children's Press, 1982.

Pringle, Laurence. *Animals and Their Niches: How Species Share Resources.* New York: Morrow, 1977.

Russell, Helen Ross. *City Critters.* American Nature Study Society, 1968, 1975.

Scott, Jack Denton. *Window on the Wild.* New York: G.P. Putnam's Sons, 1980.

Silverstein, Alvin, and Silverstein, Virginia B. *Animal Invaders: The Story of Imported Wildlife.* New York: Atheneum, 1974.

Birds

Friskey, Margaret. *Birds We Know.* Chicago: Children's Press, 1981.

Jennings, T. *Studying Birds in the Garden.* Elmsford, NY: Pergamon Press, 1975.

Little, Brown Editors, eds. *Birds: East Coast Edition.* Boston: Little, Brown, 1981.

May, Julian. *Birds We Know.* Mankato MN: Creative Education, Inc., 1973.

Morris, Dean. *Birds.* Milwaukee: Raintree,1977.

Newing, F.E., and Bowood, Richard. *Birds and How They Live.* Bedford Hills, NY: Merry Thoughts. (no date given)

Selsam, Millicent E., and Hunt, Joyce. *A First Look at Birds.* New York: Walker, 1973.

Storms, Laura. *The Bird Book.* Minneapolis, MN: Lerner, 1982.

Wells, Robert. *The Science-Hobby Book of Bird Watching.* Minneapolis, MN: Lerner, 1968.

Insects

Hogner, Dorothy C. *Good Bugs and Bad Bugs In Your Garden: Backyard Ecology.* New York: Harper & Row, 1974.

Hopf, Alice C. *Bugs Big and Little.* New York: Julian Messner, 1980.

Kirkpatrick, Rena K. *Look at Insects.* Milwaukee: Raintree, 1978.

Selsam, Millicent E., and Hunt, Joyce. *A First Look at Insects.* New York: Walker, 1975.

Simon, Hilda. *Our Six-Legged Friends and Allies: Ecology in Your Back Yard.* New York: Vanguard, 1972.

Stevens, Carla. *Insect Pets: Catching and Caring for Them.* New York: Greenwillow, 1978.

Plants

Gal, Frank C., and Gal, Clarice W. *Experiences with Plants for Young Children.* Palo Alto, CA: Pacific Books, 1975.

Jordan, Helene J. *How a Seed Grows.* New York: Harper & Row, 1972.

Kuchalla, Susan. *All About Seeds.* Mahwah, NJ: Troll Associates, 1982.

Lambert, Mark. *Plant Life.* New York: Franklin Watts, 1983.

Lauber, Patricia. *Seeds: Pop, Stick, Glide.* New York: Crown, 1981.

Marcus, Elizabeth. *The Amazing World of Plants.* Mahwah, NJ: Troll Associates, 1984.

Miner, Irene O. *Plants We Know.* Chicago: Children's Press, 1981.

Nussbaum, Hedda. *Plants Do Amazing Things.* New York: Random, 1977.

Rahn, Joan Elma. *Plants Up Close.* Boston: Houghton Mifflin, 1981.

Russell, Solveig Paulson. *Like and Unlike: A First Look at Classification.* Ithaca, N.Y.: Henry Z. Walck, 1973.

Selsam, Millicent E. and Hunt, Joyce. *A First Look at the World of Plants.* New York: Walker, 1978.

A First Look at Leaves. New York: Walker, 1972.

Stefferud, Alfred. *Wonders of Seeds.* New York: Harcourt, Brace, Jovanovich, 1956.

Trees

Arnold, Caroline. *The Biggest Living Thing.* Minneapolis, MN: Carolrhoda Books, 1983.

Brandt, Keith. *Discovering Trees.* Mahwah, NJ: Troll Associates, 1981.

Bulla, Clyde R. *A Tree Is a Plant.* New York: Harper & Row, 1973.

Dickinson, Jane. *All About Trees.* Mahwah, NJ: Troll Associates, 1983.

Dowden, Anne. *The Blossom on the Bough: A Book of Trees.* New York: Crowell, 1975.

Goode, Diane. *First Book of Tree Identification.* New York: Random House (date not set).

Hamer, Martyn. *Trees.* New York: Franklin Watts, 1983.

Kirkpatrick, Rena K. *Look at Leaves.* Milwaukee: Raintree, 1978.

______ *Look at Trees.* Milwaukee: Raintree, 1978.

Orange, Anne. *The Leaf Book.* Minneapolis, MN: Lerner, 1975.

Podendorf, Illa. *Trees.* Chicago: Children's Press, 1982.

Warren, Elizabeth. *I Can Read About Trees and Plants.* Mahwah, NJ: Troll Associates, 1975.

Selsam, Millicent E. *A First Look at Leaves.* New York: Walker, 1972.

Water

Ardley, Neil. *Working with Water.* New York: Franklin Watts, 1983.

Dickinson, Jane. *Wonders of Water.* Mahwah, NJ: Troll Associates, 1983.

Goldin, Augusta. *The Shape of Water.* Garden City, NY: Doubleday, 1979.

Green, Ivah. *Splash and Trickle.* Carlstadt, NJ: Rainbow Books, 1978.

Leutscher, Alfred. *Water.* New York: E.P. Dutton, 1983.

Lewis, Alun. *Water.* New York: Franklin Watts, 1980.

Winter

Cole, Joanna. *Plants in Winter.* New York: Harper & Row, 1973.

Cosgrove, Margaret *Wintertime for Animals.* New York: Dodd, Mead, 1975.

Selsam, Millicent E. *Where Do They Go? Insects In Winter.* New York: Four Winds Press, 1982.

Russell, Helen R. *Soil: A Field Trip Guide.* Boston: Little, Brown, 1972.

Graves, Donald H. *Writing: Teachers and Children at Work.* Exeter, NH and London: Heinemann Educational Books, 1983.

New York Resources

Central Park sponsors a variety of exciting and informative learning experiences for school groups. Inquire at the Dairy and Belvedere Castle for a calendar.

Belvedere Castle
Learning Center (212) 772-0210

Urban Park Rangers
maintain a continuing education program. Call Central Park Information for details.
(212) 397-3156

Museum of the City of New York
5th Avenue at 103rd Street/(212) 534-1672

The New York Historical Society
170 Central Park West/(212) 873-3400

The Dairy
Visitors' Information Center and Resource Center 64th Street/(212) 397-3156

History and Design Program
(intended for high school students and adults; may be useful for reference) (212) 397-3183

The Park Study Program and Manual were made possible with grants from the following:

P.W. Tate Brown
Mrs. Edward C. Cassard
Con Edison
Exxon Community Service Fund
Herman Goldman Foundation
L.A.W. Fund
New York Telephone
H. Stuart Valentine, Jr. Charitable Trust

Design: Herbert Reade Inc.
Photography: Robert Reade
Churchill School Staff
NYC Parks Photo Collection

Churchill School and Center for Learning Disabilities
22 East 95th Street, New York, New York 10128